



EUROPEAN NEWS

France launches protection plan for the Antarctic

By Ian Davidson in Paris

THE FRENCH Government yesterday publicly launched its proposal for an environmental protection system in the Antarctic, which it hopes would make the region a protected "Nature Reserve".

Poland takes Western agencies into new territory

Funding bodies are weighing the options in an unprecedented transformation, writes Stephen Fidler

SINCE THEY were presented with a dramatic plan of economic reform for Poland's beleaguered economy in Washington last month, Western economic policy makers have been considering what should be their proper role in encouraging the transformation.

tion that unless a large part of it is forgiven, Poland will never emerge. The country's hard currency foreign debt amounts to about \$36bn - \$26bn to creditor governments grouped under the auspices of the Paris Club, \$9bn to the commercial banks and the rest to others, including Eastern bloc governments.

other middle-income debtors which would demand similar treatment. It has led to the conclusion that except for loans from the IMF and World Bank, grants are the obvious way in which new Western funds will have to be channelled into the country.

that will grow increasingly impatient with no obvious signs of progress. Forty years of risk aversion are not going to be transformed into entrepreneurial behaviour overnight.

into investment spending and provide a channel for foreign investment. Debt-equity swaps could also help to reduce commercial debt burdens as well as bring in foreign investment and expertise.

Far-right German party warms to National Front

By David Goodhart in Bonn

WEST GERMANY'S far-right Republican Party and France's far-right National Front have announced closer co-operation, after talks at the weekend in Munich, despite the traditional anti-German feeling of the French right and differences over the Italian-speaking minority in Austria.

EIB aid to East bloc rebels 'will go to infrastructure'

By Tim Dickson in Brussels

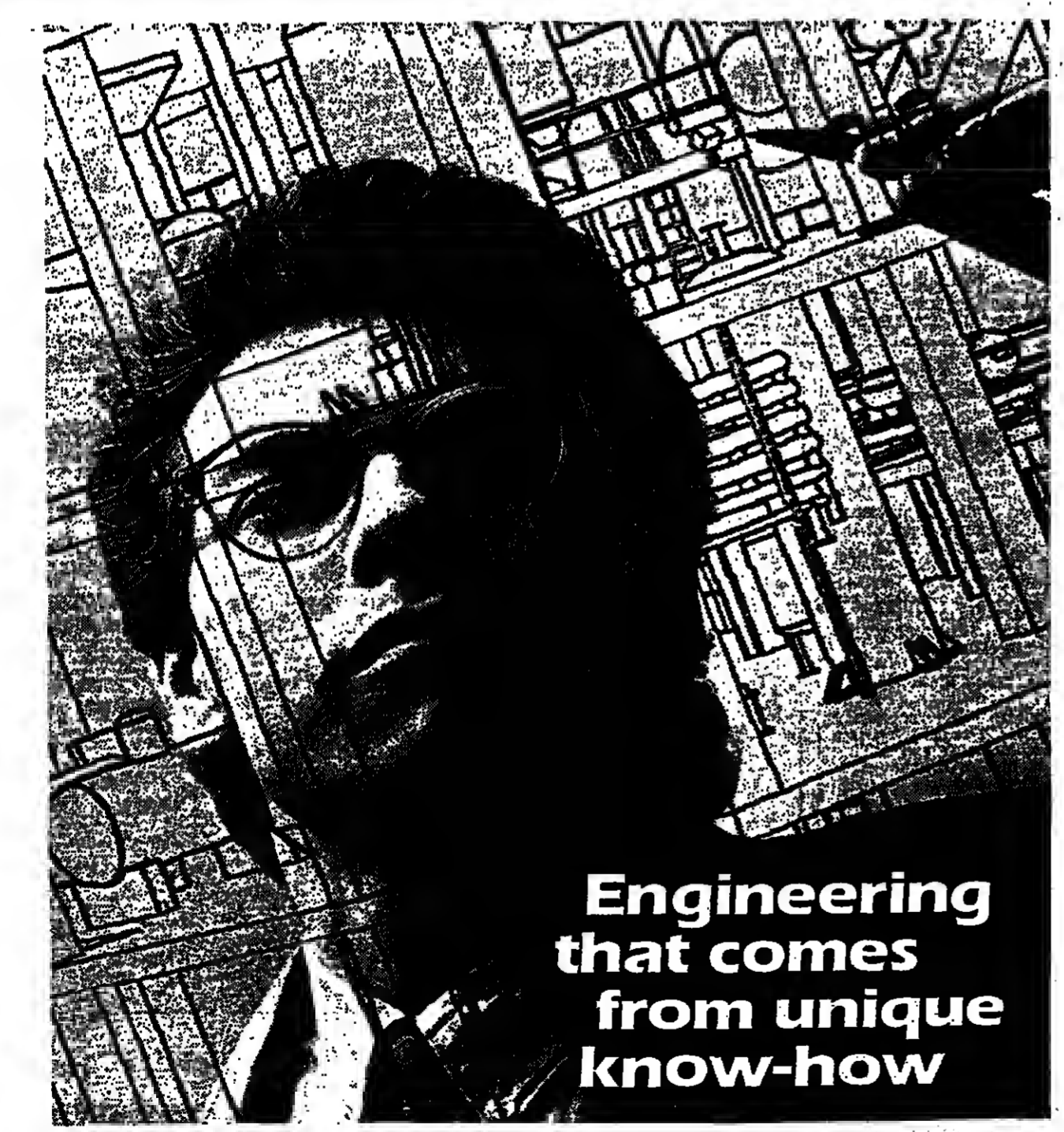
THE FIRST loans to Poland and Hungary from the European Investment Bank are likely to be targeted on infrastructure and industrial projects.

benefit of its Triple A rating - and lending most of its money to projects in the less-favoured regions of the EC.

directly-financed European Development Fund (for Lomé) provide significant sums of "risk capital" enabling the EIB to "soften" the terms and conditions of its loans.

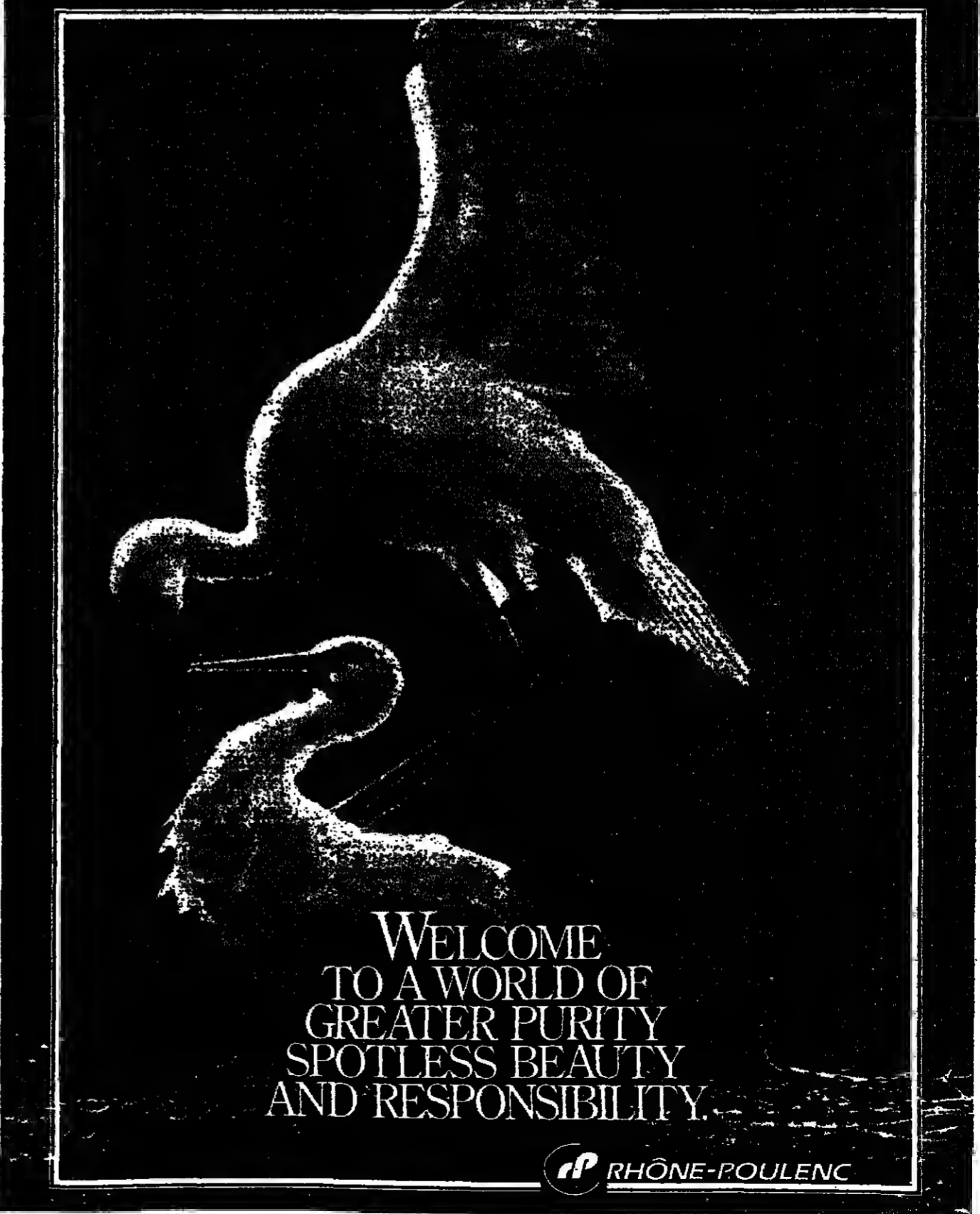
ing about the difficult process of transition to a market economy. We will certainly want to co-operate with them in general terms or through specific investments.

ident adds that the bank would expect to concentrate on "feasible and self-supporting projects".



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EUROPEAN NEWS

Pechiney puts pressure on Brussels over smelter plan

By William Dawkins in Paris

PECHINEY, THE world's third largest aluminium producer, has threatened to scrap a planned FF4.5bn (\$370m) plant unless the European Commission clears it from allegations of illicit state aid by the end of the month.

Mr Jean Gandois, chairman of the French nationalised group, has said he will abandon the scheme unless the Commission rules against claims, lodged nearly a year ago by British Steel, that the project infringes EC competition rules, or at least decides that only minor changes are needed.

The group has invested FF600m in the early phase of the project, which would create 650 jobs in the high unemployment area of Dunkerque and be the group's biggest smelter, producing 200,000 tonnes of aluminium annually.

EDF officials say they are hoping for up to five similar deals and are already talking to "several" French and foreign companies, believed to include a leading Swedish paper producer.

At Dunkerque, EDF would take a 49 per cent stake - with Pechiney taking the rest - in a management company that would provide the plant's working capital. EDF would sell power at a price based on its cheapest export rate, but this would rise with the plant's profits. The cash for construction of the smelter itself would come from Pechiney plus institutional investors, who will be approached once a decision has been made from Brussels.

In a separate move, Pechiney has announced a FF1.5bn plan to increase the capacity of a rolling mill at Neuf-Brisach in eastern France from 265,000 tonnes to 350,000 tonnes annually. This makes it one of the world's four largest mills, and it will process a large part of Pechiney's 360,000 tonne annual capacity.

Portugal may limit foreign holdings in privatised companies

By Patrick Blum in Lisbon

THE PORTUGUESE Government is studying proposals to limit the influence of foreign investors in newly privatised companies. The aim is to help create a strong nucleus of Portuguese shareholders to ensure that important companies, especially financial institutions, remain in domestic hands.

There is already a 10 per cent limit on the amount of shares foreign investors can buy in companies being privatised. This means a maximum foreign holding of 5 per cent because in each privatisation to date, only 49 per cent of shares were offered to the public. However, this will change next year as the Government sells its remaining stake in some companies and others come up for privatisation, including Banco Portugues do Atlantico, the country's largest state-owned bank.

One proposal foresees privatisations being undertaken in separate tranches with a pre-qualifying round during which the Finance Ministry would select an appropriate "hard nucleus" of Portuguese investors.

After the initial euphoria following spectacularly successful privatisations this year, the authorities have become concerned about the future ownership of companies. Each privatisation has seen strong demand from international investors, leading to fears that some large concerns could come under foreign control.

The outcry in some sections of the press about "the country being up for sale" is putting political pressure on Mr Anibal Cavaco Silva's Social Democratic Government, which is committed to selling off state assets seized during Portugal's 1975 revolution. It will shortly present new legislation to facilitate privatisations, but it also wants to safeguard Portuguese interests.

The Government's problem is that foreign groups have sought, with some success, to circumvent the 10 per cent limit by buying shares through local subsidiaries or making alliances with Portuguese companies.

Big foreign groups have gained significant positions in the part-privatised Banco Totta e Acores and in insurers Alianca Seguradora, with the objective of winning representation on these companies' management boards.

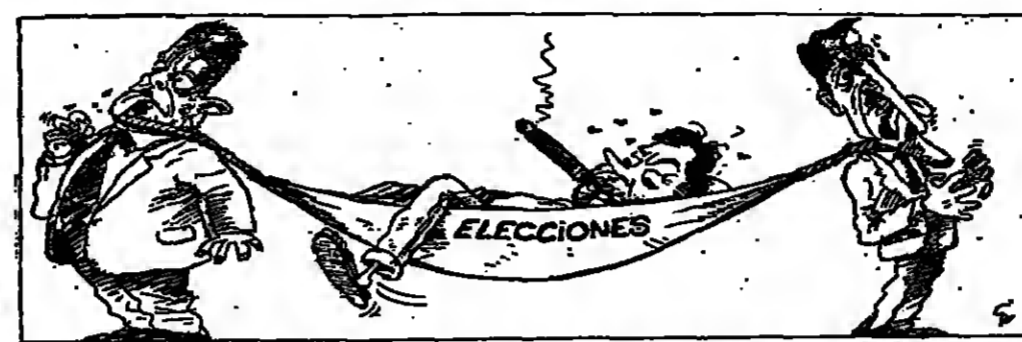
Dull, perhaps, but that's part of being a normal democracy

Peter Bruce previews a predictable Spanish election

CAMPAIGNING begins today in Spain's fifth democratic election since the death in 1976 of General Francisco Franco. The election is being held on October 29 so what is about to happen will, mercifully, be brief.

Prime Minister Felipe Gonzalez's Socialist Party will win, probably, though not certainly retaining its overall majority in the Cortes. The right-wing Partido Popular (PP) will come second, followed by either the communist Izquierda Unida (IU) or former Prime Minister Adolfo Suarez's populist Cen-

trists. The fact that they have been hurried into calling the election eight months early by a deteriorating economy and the first hints of a fall in property prices in the cities has been quickly forgotten. This was easy, for if the Socialists have become arrogant, aloof and even corrupt during their seven years in power, their opponents are to blame. Mr Suarez's years out of power have put so much distance between himself and reality that he now refuses to attend parliament unless Mr Gonzalez is there as well. Mr Suarez, who will do anything for a vote, is proposing his time to accept military service and to pay unemployed youths a minimum wage.



Galligo & Rey in El Pais sum up the election: Gonzalez is centre, Fraga, left, and Suarez right

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lished so far, the PP will win about 22 per cent of the vote, the CDS about 8 per cent, the IU, winning support in the large cities, could rise sharply to 10 per cent and the Socialists around 40 per cent. Mr Gonzalez's ministers have made it clear that even if they lose their overall major-

ity, they will rule alone. This could easily be done by buying off one of the smaller nationalist groupings in the Cortes. The Socialists, though, are trying hard to hold onto the majority. For the first time, the party has instructed its people on its electoral lists to get on to the streets and campaign door to door.

This will come as a great surprise to Spanish voters, most of whom have never had an opportunity, under the proportional representation system, actually to talk to the people who are supposed to represent them.

Spanish Elections



tro Democratic y Social (CDS). Voters will turn out in fewer numbers than ever. But the result is not really the issue: whether to rejoice in or weep for the almost complete absence of ideas, ideology, debate or even passion in Western Europe's youngest democracy three weeks ahead of an election is.

Alvaro Gil Robles, the government-appointed Public Ombudsman, welcomes the calm. "I'm glad to say it, but I don't think Spain is the kind of place that foreign journalists can win prizes writing about any more. We have become normal. The important thing is to be able to vote. If people don't have any problems they may not bother."

The campaign will probably be like the Spanish and their liberal friends abroad once hoped Spanish democracy would be like. The parties - there are no individual candidates as such - will each try to buy votes. Like the good-marketing men they have become, the Socialists have

packaged themselves as airline pilots - handsome, going slightly grey, dependable, technically superior and fatherly. Daddy, says the message, is going to take you flying. The fact that they have been hurried into calling the election eight months early by a deteriorating economy and the first hints of a fall in property prices in the cities has been quickly forgotten.

This was easy, for if the Socialists have become arrogant, aloof and even corrupt during their seven years in power, their opponents are to blame. Mr Suarez's years out of power have put so much distance between himself and reality that he now refuses to attend parliament unless Mr Gonzalez is there as well. Mr Suarez, who will do anything for a vote, is proposing his time to accept military service and to pay unemployed youths a minimum wage.

The hard sell has already reached its apotheosis with Mr José María Ruiz-Mateos, the businessman facing fraud charges in relation to the expropriation of his Rumasa banking and industrial empire. His manifesto promises to privatise practically all of the state's industrial interests but it is hard to be sure he means it. Instead, Mr Aznar has quickly thrown himself into gimmicky.

Last weekend he threatened not to stand at the head of PP electoral lists if the Government did not stop manipulating the television news. The newspapers that support him manipulate news all the time but only 8 per cent of Spaniards read newspapers and with all the other opposition parties complaining about the state television's coverage of

Ozal keeps his counsel on presidential aspirations

By Jim Rodgers in Ankara

THE ELECTION for a new President in Turkey is looming with no clear favourite of interest. From the Turkish Ocal, the Prime Minister, Parliament votes on a replacement for President Kenan Evren on November 9 and formal declarations of candidacy must be made in the next nine days.

Only Mr Kasim Gulcelik, an octogenarian with a venerable political past, is considered far too old, has put his name forward so far. Mr Ocal is increasingly likely run, however, despite the dismal rating in opinion polls of his ruling Motherland Party (ANAP) two years into a second term of government.

All he has said directly is that the next President will come from Parliament and probably from ANAP. However, last week he declared his eligibility in the mass daily newspaper Cumhuriyet, and then ruled out choosing a candidate with either of the two other parliamentary parties, the main opposition Social Democratic Populist Party, and the True Path Party.

They have threatened to boycott the process, accusing ANAP of not having a significantly popular mandate anymore. Its support shrank to 18.5 per cent in a recent poll. The Government's 229 seats

in the 450-seat Parliament should guarantee that Mr Ocal wins on the third round of voting, when only a simple majority is required. It is unlikely that the election will go to its fourth and final round, which must be followed by a general election if there is no outright winner.

But Mr Ocal is likely to wait until the very last day and probably the last hour before revealing his decision, according to Mr Mehmet Kocediler, a leading contender for the premiership and ANAP chairmanship in the event of an Ocal presidency.

Other possible replacements for Mr Ocal as Premier and party chairman are Mr Ekrem Fakdemirli, the Finance and Customs Minister, Mr Hasan Celal Guzel, the former Education Minister, Mr Husnu Dogan, the former Agriculture Minister, and the ambitious young Foreign Minister, Mr Mesur Yilmaz.

The latter is a favourite of the party's liberal wing, but would be vigorously opposed in the party congress soon after Mr Ocal's elevation by Mr Kocediler, who leads the "holy alliance" of Islamic conservatives and right-wing nationalists which account for around a quarter of ANAP's parliamentary group.

Yugoslav call for multi-party system

Opposition groups in Yugoslavia have called for a multi-party democracy and an amnesty for all political prisoners, the Yugoslav news agency Tanjug said yesterday, Renter reports.

About 30 members of groups from Slovenia, Croatia and Serbia, meeting in the Slovenian town of Otocec ob Krki on Sunday, also called for the offence of slandering the state to be abolished, Tanjug said.

A score of opposition groups have sprouted up, particularly in Slovenia and Croatia, over the past year.

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OVERSEAS NEWS

Kalashnikov rule maintains the ethnic divide in southern Pakistan

Tensions are reaching an explosive level in Sindh province, where more people have guns than water and sewage, writes Christina Lamb

ON a balmy autumn evening one year ago, men of the southern Pakistani town of Hyderabad were going out for prayers. A shot rang out and the lights went off.

Hooded gunmen appeared from nowhere on rooftops and motorbikes, and by dawn 200 people had been massacred and the streets were running with blood. Last Sunday in a chilling repeat, masked gunmen entered several schools and at gunpoint forced headmasters to close them.

More people have guns than water and sewage. Gang rapes occur in hospitals, colleges, buses are attacked. Students carry Kalashnikovs rather than textbooks and after a shootout last month, Karachi University which is rarely open, resembles a prison camp, armed guards everywhere.

There are too many people and too few police. Qaim Ali Shah, Chief Minister of Sindh, admits that at any one time there are just 3,000 police available for Karachi's population of 5m among whom he says are more than 1m illegal immigrants.

These problems worsened immeasurably in 1988 when the army moved in to ruthlessly crush an uprising against martial law. Pakistan's first elected Prime Minister, Zulfikar Ali Bhutto, a Sindh, had been hung by the military in 1979. In November's elections last year, the first since 1977, Sindh got a chance to protest. It did so by voting overwhelmingly for his daughter Ms Bhutto's People's Party (PPP), which swept 31 out of 48 seats.



controlling Sindh, and containing moves for independence reminiscent of those leading to the breakup of Pakistan and creation of Bangladesh in 1971. The same people are now shaking their heads. In December the army was removed - democracy was going to cure all the ills. But now they are back, not just at Karachi university. The Racecourse and sports ground double as army camps.

Pakistani Prime Minister Benazir Bhutto (left) is thought to be the only person capable of controlling independence moves and violent ethnic unrest in Sindh province, which has claimed more than 1,000 lives since 1987.

Altat Hussain (right), "uncrowned King of Karachi" and leader of the MQM party representing the minority mohajirs, voices resentment at the majority Sindhis, saying "mohajirs have no place else...we are treated as third grade citizens".



violence are easier to sow than uproot. In what many interpreted as a warning, last week General Aslam Beg, the army chief, told press there had been pressure on him for the army to intervene in Sindh, and said, "we could restore complete peace within days but that would have far-reaching consequences of a different nature".

feudal politicians, "Altat bhai" as he is known, cultivates his lower middle class image, proudly riding around on a Honda 50 and talking revolution.

The MQM bears a grudge. While their members are people whose parents left India, giving up everything because they did not want to be a deprived minority, Altat says "today we are treated like third grade citizens". Their main grievance is the quota system. Mohajirs tend to be better educated so had a disproportionate 33 per cent of top civil service jobs until quotas introduced in 1974 began pushing them out.

government complain their ministries are powerless while PPP ministers say they are being blackmailed by the MQM who threaten to abort the alliance in order to secure release of their prisoners, knowing that without the MQM the Bhutto government would almost certainly collapse.

Both sides have internal problems. Recent fighting was between factions of the MQM though they turned on Punjabis to cloak this. MQM hardliners in Hyderabad whose mayor has survived several Sindh assassination attempts, are eager to end the alliance as are Sindh nationalists within the PPP who feel Bhutto has conceded the cities to MQM.

Pakistani leader calls for end to Kabul aid

PAKISTANI President Ghulam Ishaq Khan yesterday told his front-line militia that the Soviet Union's support of the Communist Government of Afghanistan was the main obstacle to ending that country's civil war.

He said Pakistan still believed that Moslem rebels, armed chiefly by the US, were the only ones capable of heading a popular Islamic regime in Kabul.

aims to replace President Najib's ruling People's Democratic Party of Afghanistan. "We believe that the mujahideen will ultimately succeed in the restoration of Afghanistan's independent, non-aligned and Islamic status," Ishaq Khan said.

In 1979, Soviet forces intervened to replace one pro-Moscow government with another in Kabul, then stayed on help fight the mujahideen. The Red Army completed its withdrawal from Afghanistan last February. But the rebels have been unable to topple the Government, which continues to receive Soviet aid.

Sri Lanka family killed

TWO fathers and their two children, a boy and a girl, were shot dead in Sri Lanka in the latest round of political violence, Reuter reports from Colombo.

hon' and army uniforms in raids on rebel hideouts. Thirteen rebels were killed. The recent spate of violence has been attributed to the left-wing guerrillas and pro-government death squads.

A government statement said they were among 24 people killed since Sunday. The men and children were shot by unidentified men in police uniform in the south of the country. The statement gave no further details.

The guerrillas of the People's Liberation Front targeted a six-day ceasefire called by the government ending last week and continued killing and destroying state property. The statement said rebels set fire to a rubber factory, post office and several state vehicles in the past day.

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...with London 34th. Advertisement for Teesside Initiative Talent Ability, highlighting its quality of life and amenities compared to London. Includes a map of the region and contact information for Teesside Development Corporation.

AMERICAN NEWS

# Fed unease surfaces with US Treasury policy

By Peter Riddell, US Editor, in Washington

TENSION has increasingly developed between the Federal Reserve and the US Treasury over a wide range of economic policy issues including foreign exchange market intervention, interest rates and the Third World debt strategy.

This has been reflected in friction between leading officials on both sides, as was noted by ministers and bankers during the annual meetings of the International Monetary Fund and World Bank two weeks ago. Bear, Stearns, the Wall Street investment advisers, said recently that "the Treasury and the Federal Reserve are at war" in relation to interest rates and the dollar.

The divisions surfaced publicly at the weekend when the minutes of the Federal Open Market Committee showed that two key Fed governors - Mr Manuel Johnson, the vice-chairman, and Mr Wayne Angell - dissented from an increase in the limits for the Fed's currency holdings. This was because of their opposition to intervention in the market "to drive the dollar lower as compared with intervention to avoid disorderly conditions by stabilising or limiting increases in the dollar exchange rate".

The two governors argued that "intervention of the former type confuses market participants concerning the policy commitment towards price level stability and can contribute to disorderly markets."

This public expression of dissent is significant, not least because Mr Johnson is usually regarded as a close ally of the Treasury on economic policy.

Moreover, although the two governors were outvoted, their views reflect broader doubts within the Fed, shared by the majority, about the efficacy of large-scale intervention.

The Fed has resisted Treasury calls for lower US interest rates as a means of bringing down the dollar. The predominant Fed view has been that interest-rate policy should be used primarily in relation to domestic conditions, notably curbing inflation. In practical terms, however, the latest evidence of an easing of labour market conditions may lead to lower US rates before long.

Another growing cause of tension has been over the Third World debt plan launched in mid-March by Mr Nicholas Brady, the Treasury Secretary. The Fed had doubts then about its feasibility and, while it has been closely involved with Mexican debt



Brady: Fed doubts about debt plan

negotiations, its officials have shared some of the reservations expressed by the commercial banks about the prospects for new loans.

These differences have become tied in with a growing debate in Congress about the powers of the Fed. Moreover, President Bush shortly has to decide how to fill the vacancy left by the resignation from the board of Mr Robert Heller.

# Hyper-inflation joins race for Brazil polls

Analysts study Weimar republic and talk of political disaster, writes Ivo Dawney

AS Brazil's 22 presidential candidates race towards their appointment with the ballot box on November 15, a growing fear among economists is that hyper-inflation may beat them to it.

Last month, price rises reached a record 36 per cent. There are forecasts of more than 40 per cent for October and few will take bets that the graphs will not go into the vertical before the second round of the two-phase poll on December 17.

Despite government assurances that foreign exchange reserves are adequate and tough monetary controls are in force, both government and business know that any sharp rise in inflationary expectations could provide the fuel for a disaster.

Already this month, three minor panics in the markets have seen gold and the black dollar return to record highs as nervous investors have ignored real monthly interest rates on government paper of up to 6 per cent and moved into internationally convertible assets.

After a bank holiday weekend, all eyes today will be focused on the weekly auction of the main paper - the *Letra Financeira do Tesouro* - which closed last Friday at an unswerving 62 per cent a year. Once again last week, Mr

Mallouf da Nobrega, Brazil's finance minister, attempted to stem the tide of price rises by appealing to industry to hold down charges. In a series of meetings with leading industrialists, he hammered out a deal by which key sectors will hold down increases to 10 per cent below last month's inflation rate.

Moreover, in the manner of a Levantine despot killing the bearer of unpleasant tidings, he closed the gold futures market, blaming speculators for the 20 per cent rise in prices.

Last month, a conference of the great and good gathered in Rio to discuss the first publication in Portuguese of Brechtian-Turroni's *The Economics of Inflation* - the classic study of events leading to the collapse of confidence in Germany's Weimar Republic in June 1923.

Its conclusions were far from encouraging. Economists from Professor Celso Pastore, the monetarist former central bank governor on the right, to deputy Cesar Maia of the left-wing populist Democratic Workers' Party agreed that, indeed, it could happen in Brazil.

Dr Paulo Guedes, a champion of orthodox fiscal measures, pointed out that, as in 1920s Germany, the conjunction of government deficits, the monetarisation of debt and the inability of the authorities to raise tax revenues are all in



De Mello: economic orthodoxy would be forced on him

place.

"It is inexorable," he concluded. "If we don't act with force and determination as well as the right measures, hyper-inflation is inevitable."

But while the platform could unite around a programme to cut the public sector deficit - currently expected to exceed 6 per cent of gross domestic product - there was equally uniform scepticism as to the capacity of Brazil's leaders to take the measures necessary to avert a collapse.

In 1920s Germany, the government took authoritarian

power through decree legislation and an autonomous central bank. In contemporary Brazil, the new constitution gives Congress formidable blocking powers and ensures a host of costly privileges from subsidies and tax breaks to guaranteed employment for civil servants.

Mr Walder de Góes, the sole political scientist at the seminar, warned: "Without a stronger president, Congress will continue to be too weak to take action, but still strong enough to prevent it."

His gloomy conclusion, widely shared, was that only with the advent of hyper-inflation will the political impetus build up to tackle the entrenched interests whose dogged defiance of their jobs has rendered President José Sarney's regime powerless.

"It is better that it comes quickly, because it is only then that a new climate of expectations can emerge," he said.

Not too quickly, however. Many are counting on prices being held down enough to allow the presidential elections to be concluded in December. That would clear the political decks to allow an accelerated transition like that of Argentina's where President Raúl Alfonsín handed over power early to Mr Carlos Menem.

Few now believe that the Sarney government will be

able to struggle on to the official inauguration date of his successor on March 15.

It is not clear, however, whether an early economic collapse would favour the left or the right. Mr Fernando Collor de Mello, a young state governor of relatively liberal economic views, remains 30 points ahead of Mr Leonel Brizola - a populist socialist still oriented to a command economy model.

Most appear to believe, however, that the options will be limited. Mr Sarney's heir will be forced, like Mr Menem, to adopt tough economic orthodoxy. But as the election moves towards its final month, many media commentators have hit out at the candidates for failing to communicate the fragility of Brazil's economic position or their plans for tackling it.

It is commonly claimed that many hopefuls are entirely unaware that the country is in a precipice. That may be unfair. Like anywhere else, Brazilian politicians prefer not to sell an increasingly angry electorate a package of blood, sweat, toil and tears.

Amongst the candidates at least, hope is the preferred prescription. After all, as deputy Cesar Maia put it with classic political defiance: "In Brazil, to be a pessimist is merely to be a well-informed optimist."

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# Argentina paves way for foreign investment

By Gary Mead in Buenos Aires

MR Nestor Rapanelli, Argentina's Economy Minister, yesterday signed two decrees which take the country's gradual opening-up to foreign capital one step further.

One will remove the complicated set of regulations concerning foreign investment, replacing it with what promises to be complete freedom for foreign capital to buy or create businesses in Argentina without prior government approval. One condition is that any such new foreign investment should be real and not simply a movement of paper. New foreign investments will require Economy Ministry approval.

However, certain areas, such as the media, are to be excluded from the new openness to foreign investors.

The other decree concerns the highly controversial

"Compre Nacional" law, which has been used by domestic industry as a means of blocking overseas competition. The "buy Argentine" law, a form of tariff against foreign imports, is to be suspended. In principle, that should mean greater competition for domestic producers from foreign companies.

A main element of President Carlos Menem's economic plans, a new and simplified tax system, has yet to be unveiled. It is thought that it might be announced this week after last-minute adjustments in consultation with the International Monetary Fund.

At the weekend Mr Rapanelli said the current price agreement with industry was to be extended to March 1990, the month he singled out as crucial for the re-negotiation of Argentina's foreign debt.

# Panama braced for further crackdown

By Tim Coone in Panama City

SIXTEEN emergency measures will be decreed in Panama this week following the failure of last week's US-backed coup attempt to remove the country's military leader General Manuel Antonio Noriega.

Panama's tightly-muzzled media will face further restrictions, there will be regulations to control the movement of vehicles and foreign residents, and visitors will have to comply with new immigration requirements. Public employees and the armed forces will be subject to new codes of conduct designed to enforce loyalty to the Government.

Up to 20 per cent of the public sector workforce is expected to be dismissed in the coming

purge. The new regulations, expected to be announced tomorrow, will abrogate employment protection guarantees for public sector employees in the existing labour code, and permit the suspension or dismissal of those not expressing "loyalty and patriotism", according to Manuel Dagua, president of the ruling Revolutionary Democratic Party.

The crackdown provides a smokescreen, however, for a previously-planned economy drive to cut the government wage bill. US economic sanctions imposed over the past 20 months have disrupted government finances, reducing tax and royalties income by up to 50 per cent.

# Noriega issue fails to hit Bush's popularity

By Peter Riddell

PRESIDENT George Bush's stance against General Manuel Noriega in Panama is generally backed by the American public, though the failure to order US military intervention has been sharply criticised by conservative Republicans.

An opinion poll taken at the end of last week by Gallup for Newsweek magazine shows that 45 per cent of those interviewed thought that US policy was just about right, against 9 per cent who believed the US had played too much of a role and 39 per cent who thought the role insufficient.

The same poll shows that only 26 per cent support the use of US military forces to invade Panama and overthrow Noriega.

By comparison some 79 per cent believe the US should persuade other nations in the region to pressure Gen Noriega to surrender power, while 54 per cent favour the imposition of a total US economic boycott and 46 per cent want a secret operation set up to unseat Gen Noriega.

The US is now likely to pursue a combination of these policies. Mr James Baker, the Secretary of State, has been careful not to rule out the use of force but he has stressed the US commitment to continued diplomatic pressure and economic sanctions, which are being reviewed.

Conservatives, including several prominent Congressmen, have generally been hostile to the President's failure to order military intervention. The Wall Street Journal reflected this strand of thinking in heading an editorial yesterday "Another Bay of Pigs" in reference to the failed invasion of Cuba in 1961 under President Kennedy. The newspaper talked of "a study in American indecisiveness and irresolution".

However, the majority reaction of politicians, such as Democratic leaders Senator George Mitchell and Speaker Tom Foley, and of the public is less strong. It is essentially that an opportunity may have been wasted as a result of hesitancy and caution but the position was never clear-cut because of confusing reports at the time.

Nevertheless, the episode may have some limited impact on Mr Bush's previously high standing and largely trouble-free record, especially as a series of revelations during the past week have exposed weaknesses in the gathering of intelligence and in White House decision-making.

Apart from the specific shortcomings needing to be remedied, there have, for the first time in this Administration, been recommendations between the President's senior foreign policy advisers.

WORLD TRADE NEWS

US and Brazil end computer export row

By Nancy Dunne in Washington

THE US and Brazil have ended a bitter four-year dispute over Brazil's treatment of foreign computer and electronic exports. Mrs Carla Hills, US Trade Representative, has terminated a trade investigation, initiated by the US Government under Section 301 of the Trade Act of 1974, and praised Brazil for its "willingness to work constructively with us".

EC dumping policy 'impairs competition'

By Guy de Jonquieres, International Business Editor

THE European Community's anti-dumping policy is a protectionist device which impairs competition in Europe and flouts the intention of world trade rules, according to a study by a former official of the EC Commission. Mr Michael Davenport, formerly a senior commission economist, says the EC has used its anti-dumping procedures to penalise many foreign exporters whose only crime has been to produce at a lower cost than their Community competitors.

US, Canada accused over rise in textile-curb pacts

THE US and Canada were pilloried yesterday for increasing import curbing agreements on foreign makers of textiles and clothing. William Dull-force reports from Geneva. The charge comes in a report by the textiles surveillance body (TSB) of the General Agreement on Tariffs and Trade (GATT) to GATT's textiles committee.

Yesterday began reviewing how the Multi-Fibre Arrangement (MFA), governing textiles trade, has been functioning since being renewed for a fourth five-year period in July, 1986. The TSB said it did not doubt the US and Canada had been applying MFA curbs more strictly, and pursuing a trend against that followed by all other importing countries.

dismantling the MFA forms a sensitive issue in the Uruguay Round trade talks, the TSB finding is important politically, particularly for the US. The US has recently tried to weaken Third World resistance to the extension of GATT to cover "new" trade sectors such as services, intellectual property rights and foreign investment. But it has slow on textiles and clothing. In a separate paper, GATT's secretariat recorded the estimated 24 per cent rise to \$3.36bn in value

and 18 per cent rise in volume of 1988 US textile exports. Textiles performance was more than matched by US clothing makers who followed a 1987 increase of 31 per cent with a further 36 per cent climb last year, bringing the value of their exports to \$1.31bn. Exports success came with a 4 per cent fall to \$5.7bn in 1988 in the value of US textile imports and a slowdown to a 1 per cent increase in clothing imports, which totalled \$20.4bn. Clothing imports fell

by 4 per cent in volume. Explaining the 1988 US figures, GATT refers to last year's export-boosting weakening of the dollar and to a slowdown in consumer spending on clothing in the US. This contrasts with a recent growth in spending in the EC, where textile imports rose by an estimated 8 per cent last year to some \$11bn, after rises of 32 per cent in 1986 and 29 per cent in 1987. EC textile exports rose to about \$12.3bn after two years' decline.

Japan helps Moscow open up its wild east

Sporadic successes are being made in a joint venture policy, writes Stefan Wagstyl

THE MAIN claim to fame of the 10-room state guest house in Khabarovsk, a provincial capital in the far east of the Soviet Union, is that Mr Mikhail Gorbachev, the Soviet leader, once slept there. Now foreign businessmen will get the chance to stay for 100-150 roubles (about £10) a night.

The venture is one of the sporadic successes in the Soviet far east of a policy introduced last year by Moscow of allowing local officials greater freedom in negotiating directly with foreign partners. Officials in Khabarovsk say the number of joint ventures in the region has grown in the past two years from less than five to more than 20. Many more are under discussion.



bring foreign money pouring into the far east. The sparse population of the huge region which is home to just 7m people, the poor roads, railways, airports, hotels and telecommunications are all cited by foreign businessmen as the main reasons for staying away. Moreover, there are still some important administrative barriers to entry, above all the lack of convertibility of the rouble. After recent changes in the law, foreign businessmen are now allowed to take profits

in hard currency out of the Soviet Union from two years after a venture starts operating. But this is still too long for many would-be investors. The Japanese Government frowns on investment in the Soviet Union, because of a long-standing dispute over the Northern Territories - islands off northern Japan which the Russians occupied at the end of the Second World War and which Japan claims. In practice these considerations have not prevented Japanese companies from studying even very large projects - such as developing an offshore oil and gas field off Sakhalin island.

Mitsui pays Y120bn to quit Bandar Khomeini

By Robert Thomson in Tokyo

THE Iranian Government has formally permitted the Mitsui group of Japan to withdraw from the ill-fated Bandar Khomeini petrochemical plant joint venture after the Japanese company agreed to pay a "separation fee" of just over Y120bn (S\$33m). Mitsui officials and representatives of Iran's National Petrochemical Company (NPC) signed a "deed of separation" in Tehran late on Sunday, ending the trading agreement with the 18-year involvement with the still far-from-finished project.

suspended in 1984, after having been disrupted by the Iranian Revolution in 1979 and then the Iran-Iraq war, when the site was the target of Iraqi bombing attacks. While a Mitsui survey team was on the site in 1984 assessing the potential of salvaging the project, there were further rocket attacks, and the company apparently decided shortly after to withdraw. Mitsui formally declared in July last year that it would not continue, and the two sides began a long series of negotiations. Japanese companies hope the settlement will open the way to contracts in Iran's reconstruction, but the difficulties faced by Mitsui in building the plant, then in withdrawing from the project, are also a disincentive to involvement in the country. Iranian officials have suggested that South Korean companies could replace Mitsui, but the company's officials do not consider the project viable, and suggest that generous South Korean government subsidies would be needed. Under the agreement, the Mitsui group members involved will share the separation fee payments. The company last year set aside a loss provision of Y68.9bn.

Mr Davenport calls for three reforms in the EC procedures to make them less discriminatory. The rules for determining "normal value" should be revised to remove an alleged bias in favour of finding dumping. Where dumping is found, the EC Council of Ministers should rigorously examine the impact on users before imposing price agreements or quotas on imports. The Commission should be obliged to justify proposed anti-dumping measures to the Council of Ministers in terms of all the economic interests involved. The Commission should also publish a detailed explanation of how anti-dumping duties are determined. The Charities of anti-dumping: a new form of industrial policy. Discussion Paper 22. Royal Institute of International Affairs, Chatham House, 10 St James's Square, London SW1Y 4LE.

Saab wing order goes to Spain

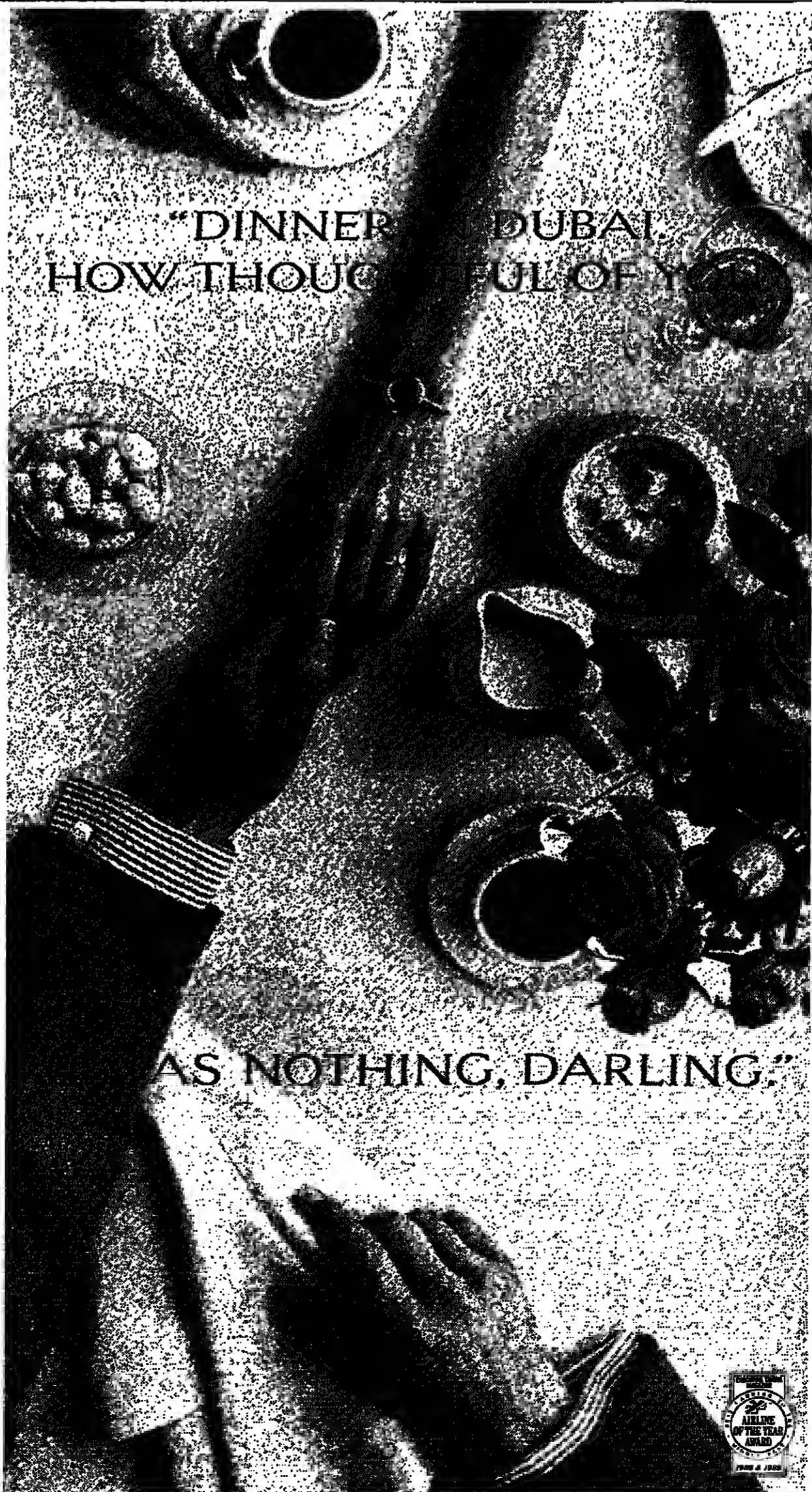
Casa, the Spanish aerospace manufacturer, has been chosen by the Saab Aircraft division of the Swedish Saab-Scania group, to design and make the complete wing for the new Saab 2000 regional turboprop airliner. Paul Betts reports. Casa competed against other European and US manufacturers for the contract. Casa will be responsible for design, stress calculations and testing of the entire wing for the new regional 50-seat turboprop aircraft. Casa is expected to make first deliveries of wings to Saab in the second half of 1991. The Saab 2000 is due to begin test flights in early 1992.

Hitch in clearing Gulf war wrecks

By Hunter Reynolds in Dubai

OVER a year after the ceasefire in the Gulf war, the political stalemate between Iraq and Iran is delaying urgent work needed to clear the area of shipping wrecks. Salvage experts say more than 600 ships were sunk or seriously damaged during the eight-year war. This does not include a host of locally-registered coastal vessels. Officials say at least 17 ships, including several large carriers, pose a serious threat to navigation. Of those, 12 are in Iranian waters, mostly around the Kharg Island oil terminal. Since last November, officials of the Regional Organisation for the Protection of the Marine Environment (Ropme) have been trying to co-ordinate clearing the Gulf. Ropme includes all states bordering the Gulf - Iran, Iraq, Kuwait, Saudi Arabia, Qatar, Bahrain, the United Arab Emirates, and Oman. Officials say all talks to date

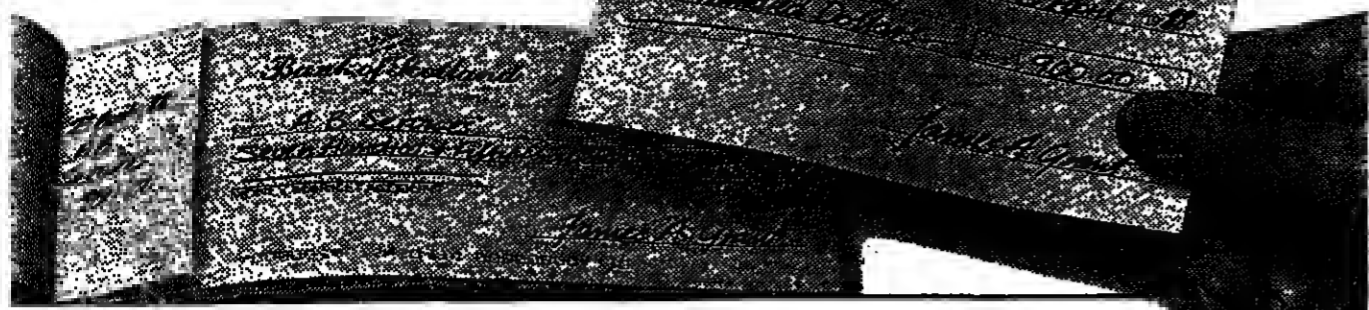
have been blocked by Iran's refusal to give information about wrecks in its waters. Tehran has recently brought in salvage teams to clear areas around Kharg, Bandar Mashur and Bandar Khomeini. Iraq is seeking sea-access for Basra, its second-largest city. The city's port is linked to the Gulf through the Shatt al-Arab waterway. It could take up to three years to clear the Shatt al-Arab from the time both sides agree to the move.



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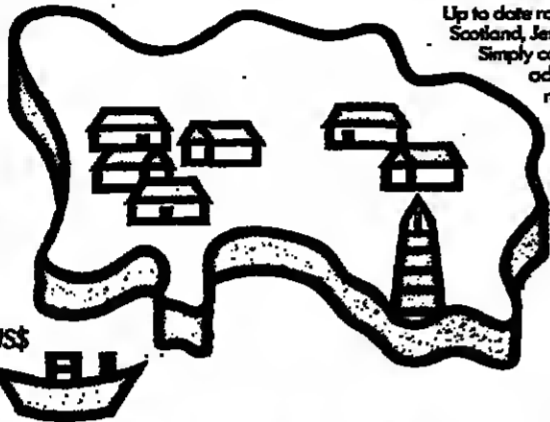
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## NORDIC CONFERENCE

### Sweden promises new rules to open doors for foreign banking

Robert Taylor reports from Stockholm

THE SWEDISH government will introduce legislation shortly to enable foreign banks to set up branches in Sweden, the country's finance minister Mr Kjell-Olof Feldt promised at yesterday's Financial Times conference on Europe and the Nordic countries in Stockholm.

He said this was one of a number of Government bills designed to liberalise the financial sector in the aftermath of Sweden's abolition of foreign exchange controls in July. Mr Feldt promised that foreign banks would be "offered equal opportunities to compete with Swedish banks" as a result of the new legislation. He added that the establishment of branches would require the Government's permission and they would be supervised jointly by the Swedish Bank Inspection Board and home country authorities "in accordance with generally accepted international recommendations on prudential supervisions."

Mr Feldt made it clear that foreign bank undertakings in Sweden would be covered by existing Swedish bank legislation, including restrictions that govern the acquisition of shares in non-banking enterprises. "Foreign banks with branch permission shall be enabled to conduct stock brokerage," he added. "No special endowment capital shall be required for the business through Swedish branches. The operations carried out through branches shall rely on the foreign banks' capital base."

Sweden's finance minister said his country wanted to discuss with the European Community "intensified co-operation in all sectors except foreign and security policy". He added that Swedish neutrality was a "key factor in a wider European security policy pattern". It was a "policy of choice and a product of the situation in Europe at any given moment as interpreted by the Swedish government".

"Our aim is the fullest possible participation in the four freedoms of the internal market. What we wish to achieve is that Swedish citizens, Swedish goods and services, Swedish enterprises are not to be discriminated against in any way in relation to their EC



Mr Kjell-Olof Feldt: opening doors for foreign banks.

counterparts," Mr Feldt said. He was "confident" that December's joint meeting between the EC and European Free Trade Association members would give the "formal go-ahead" to detailed negotiations between the two economic blocs early in 1990 with the aim of creating a "more structured partnership with common decision-making and administrative institutions".

In his speech to the conference the Speaker of the Finnish Parliament and four times Finnish prime minister Mr Kalevi Sorsa said that Finland took an "optimistic" view of working through Efta for an integrated Europe. "It makes no sense at all to disrupt a natural process by failing to build on the free trade relationship which services both Efta countries and the EC so well," he added. Mr Sorsa said he believed that the efforts to create a "third road" between the present Efta-EC relationship and full EC membership would "eventually succeed", involving free movement of goods, services, capital and people as well as close association on economic, environmental, research and development and education policies.

Mr Sorsa acknowledged this would involve "building a legal framework for all this and the setting up of institutions for decision-making and for allowing the Efta countries to participate in the EC's legislative process". He said his "optimistic vision was founded in reality" but he also added that "EC membership for Finland was not compatible with its policy of neutrality". He said he believed the EC's social dimension would have to be strengthened to assist in bringing Efta and the EC together but he was convinced a "new multilateral framework between the two blocs was realisable." He concluded that Efta countries needed "to stick together and not individually make our way to Brussels and other centres of power."

Mrs Eldrid Nordbo, state secretary in the office of Norway's prime minister Mrs Gro Harlem Brundtland told the conference that her government, which looks set to leave office early next week, was strongly in favour of creating new structures covering the EC and Efta, including the surveillance and enforcement of the rules and regulations agreed by both

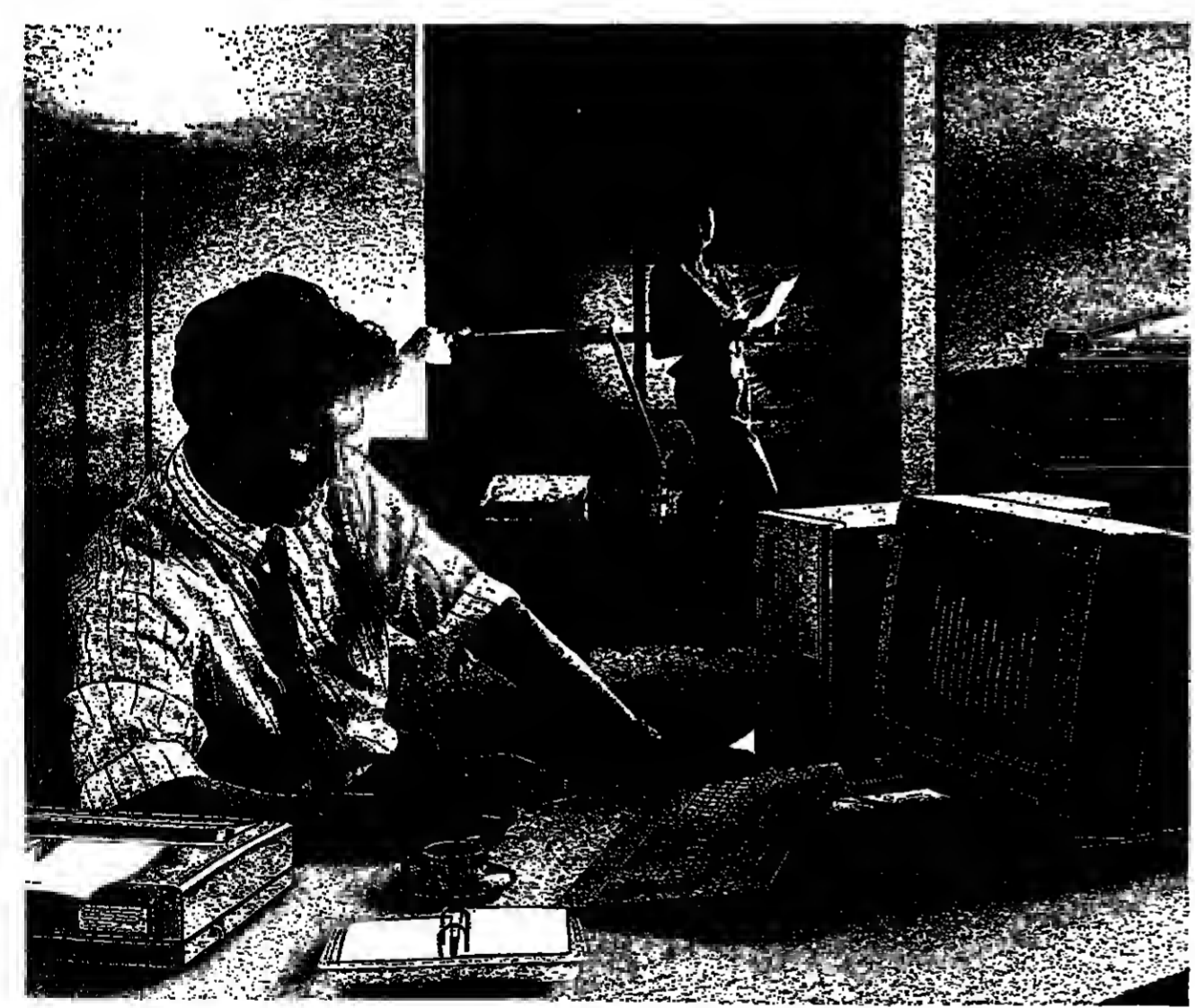
sides. She believed there would have to be a joint EC-Efta court system based on the existing EC court of justice.

She said that the present Norwegian government was keeping its options open on whether there should be a customs union between Efta and the EC "or a broadening of the existing free trade agreements". Mrs Nordbo said Norway's foreign and security policy interests made it important that the country played "an active part in the ongoing integration process." She added that "our political interests require we are at the forefront of economic and trade co-operation in western Europe."

Mr Thorstein Ottarsson, economic adviser to Iceland's prime minister said that his country welcomed closer integration with the EC through Efta but he stressed that Iceland needed only free access for processed fish products in the European market. He added that Iceland was "not in a position to give any fishing rights away to the EC and as a matter of political principle agreed by all the political parties in Iceland, it would never be accepted to negotiate fishing rights in Icelandic waters for other nations."

The managing director and chief executive of the Gothenburg group at Skandinaviska Enskilda Banken, Mr Bo Hansson called for the abolition of Sweden's turn-over tax, which he said had led to the trading in Swedish securities on foreign stock exchanges on a growing scale. But he also said that the Nordic banks and financial institutions were well equipped to meet increased competition, adding that a common Nordic stock-exchange information system starting next year would pave the way to the development of a Nordic stock market.

Mr Harald Norvik, president and chairman of Statoil in Norway said that the growth of the EC's internal market meant that the EC's political institutions would decide upon important issues for the future marketing of Norway's petroleum products and therefore, whether or not his country became an EC member, it "should take an active part in those discussions."

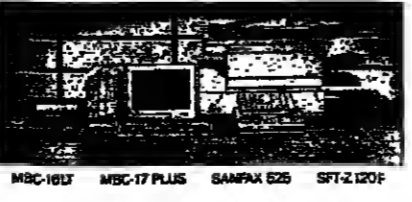


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# GATEWAY AMERICA



UK NEWS

Government says it will not 'shirk responsibilities' as sterling falls and building society raises loan rate

Unexpected rise in manufacturing costs

By Patrick Harverson, Economics Staff

Chancellor faces most difficult test in office

By Philip Stephens, Political Editor

GOVERNMENT ministers publicly closed ranks yesterday behind Mr Nigel Lawson, the Chancellor of the Exchequer, as sterling's sharp fall on foreign exchange markets and the rise in mortgage rates deepened the unease among Conservative supporters on the eve of today's annual party conference.

As Mr Lawson arrived in Blackpool for the conference last night, facing what colleagues described as the most difficult period of his Chancellorship, senior ministers privately acknowledged serious concern about the possibility of a further rise in interest rates.

In public statements, however, they took their lead from Mr Kenneth Baker, the party chairman, in predicting that the Government would soon regain its grip on the economy.

Mr John Wakeham, the Energy Secretary, echoed the general sentiments when he said that the Government knew the immediate outlook would be difficult but it would not shirk its responsibilities.

Mr Baker reaffirmed that the Government's prime objective remained the defeat of inflation, but he would not be drawn on events in financial markets yesterday. He insisted that with a general election still possibly more than two years away, the Conservatives had time to bring down inflation and interest rates and to recover their popularity.

Mrs Margaret Thatcher, the Prime Minister, offered a similarly upbeat message to a gathering of party agents last night. She said the latest rise in interest rates was necessary and had to be seen in the context of the underlying strength of the economy.

"This Government always does exactly what is necessary," she said, adding: "You have to look at the current situation in the light of the Government's record and the underlying strength of the economy."

Her aides cast doubt on any suggestion that the pound's

weakness will prompt her to accept the advice of many city of London economists and reconsider her long-standing opposition to full British membership of the European Monetary System.

One middle-ranking Government minister summed up the general mood in Blackpool on the eve of the conference with the comment that: "When things get this dire I think you will find that we (the Conservatives) will pull together."

Others acknowledged, however, that if sterling continues to slide and forces another rise in interest rates, the Government could be faced with a serious outbreak of discontent among its supporters. "We just hope it does not happen," one minister commented.

Mr Baker said that Mr Lawson would use his speech to the Conference on Thursday to defend the Government's record on the economy in "a very positive way". He would point out that the Government had presided over an unprecedented period of economic growth and falling unemployment and that, despite present difficulties, investment was still rising strongly.

At the same time party managers were playing down weekend reports of differences between Mr Lawson and Mrs Thatcher's principal economic adviser, Sir Alan Walters. They insisted that there had been full agreement last week on the need to raise interest rates.

Mr Roy Hattersley, the opposition Labour party's deputy leader, said Mr Baker should use his speech today to help restore international confidence in the British economy.

"It is clear that the international markets are no longer prepared to accept the Chancellor's complacent assertion that our mounting trade deficit is of no real significance."

"Mr Baker must therefore give us some sign that the Tory Government recognise their errors and will respond to the consequent loss of international confidence," he said.

Halifax raises mortgage rates to 14.5%

By David Barchard

HALIFAX, the largest UK building society, yesterday raised mortgage interest rates to 14.5 per cent from 13.5 per cent - the highest ever real rate to borrowers in UK history.

The increase will take effect for its 1.6m existing borrowers from November 1. When expressed as an APR (annual percentage rate), the Halifax will charge 15.7 per cent on endowment mortgages and 15.8 per cent on repayment mortgages.

Other building societies, which in the UK are savings institutions specialising in home loans, are poised to move their rates in the next few days. Though Nationwide Anglia, the second largest building society, looks likely to keep its increase to one percentage point, in line with Halifax, some other societies may put their rates up higher.

Building societies have been holding their rate to borrowers at half a percentage point below the banks' base rate since the end of May, and

many smaller societies would like a rise of 1.25 to 1.50 percentage points.

Yorkshire, the twelfth largest society, moved ahead of the rest of the market at the weekend, taking its rate to 15 per cent. Mr David Anderson, general manager for marketing, said yesterday: "15 per cent is the lowest rate we could go to and still expect to keep our investors satisfied."

Halifax stressed that the new rate will be the highest ever real rate to borrowers in

UK history because when the bank interest rates were last this high in the early 1980s, income tax relief on interest payments on mortgage debt helped offset the burden. Since then Miras (mortgage interest relief at source) has been held at 230,000, while the average size of loans in SE England has risen to 258,000. The change means that in real terms the first time buyers will be paying interest at 2.5 per cent more than in 1984.

Lex, Page 20

AA cuts holiday sales after interest rate rise

By David Churchill, Leisure Industries Correspondent

THE Automobile Association yesterday became the first company in the travel industry to respond to the unprecedented slump in package holiday bookings for next year by axing sales of overseas air-charter package holidays.

The move means the loss of up to 500 jobs in the AA's retail travel operations at 69 travel centres throughout the UK. The AA's decision follows the 10 per cent volume slump in package holiday sales this summer and a fall of 50 per cent in the level of bookings for next summer in comparison with this time last year.

The travel trade blames the rise in interest rates over the past year for leading to the fall in demand for package holidays, although bad publicity about low hotel standards and airport delays has also harmed sales.

However, last week's rise in interest rates was the final blow for the AA. Mr Andrew Johnson, general manager of AA Travel, said: "It frankly became pointless to continue to compete in the overcrowded, heavily discounted and ultimately unprofitable air-package holidays business." He added: "We have taken a pain-

ful but necessary step."

AA Travel is the ninth largest travel agency chain in the UK with a total of 86 outlets. There are over 7,000 travel agents in the UK but the top five chains - Lunn Poly, Thomas Cook, Pickfords, Hogg Robinson, and A T Mays - account for a quarter of the total number of outlets and about half the 10m package holidays sold this year.

The fall in sales, however, has led to most travel agency chains being forced to sell holidays at up to £100 in order to attract holidaymakers. This has severely hit profit margins

and there is speculation in the travel trade of other chains scaling back their operations or merging.

The 500 jobs to be lost at the AA Travel centres include some 400 as a direct result of the decision to stop selling package holidays, with a further 100 as a result of restructuring the AA's other retail activities.

However, the AA travel centres will still continue to sell non-package holiday travel services, such as ferry bookings and travel insurance, along with its existing motoring facilities.

A LARGER than expected rise in manufacturing industry's fuel and raw material costs last month pointed towards a squeeze on company profit margins in the coming year.

The Central Statistical Office said that after allowing for normal seasonal variations manufacturing industry's input prices rose 1 per cent in September, to take the rise on the year to 5.3 per cent. The City of London's financial institutions had been expecting a monthly rise of 0.3 per cent in input prices.

The CSO said that industry's factory gate prices of manufactured goods, known as output prices, rose by a seasonally adjusted 0.4 per cent. This was in line with City of London forecasts, and factory gate prices are now rising at an annual rate of 5 per cent.

The rise in manufacturing prices was attributed to the weakness of sterling against the dollar, which put up the cost of oil and general commodities. The CSO said that a significant proportion of the rise was due to higher prices for food manufacturing materials.

City of London analysts said that yesterday's figures emphasised how important a strong pound was to the fight against inflation. Mr Nigel Lawson, the

Chancellor of the Exchequer, had hoped that last week's rise in UK interest rates to 15 per cent would support the pound and ease imported inflationary pressures.

However, the one point rise in interest rates and repeated intervention in recent days by the Bank of England in the foreign exchange markets has failed to stop sterling's slide against the dollar and the D-Mark. Analysts expect manufacturers' costs to rise further in coming months if the pound remains weak against leading currencies.

Mr Kevin Gardiner, economist with Warburg Securities, said that industry's profit margins will be squeezed next year if input prices continue to rise at the current rate. Wage costs are forecast to rise by more than 5 per cent this year, and with company earnings already showing signs of slowing, profit margins will be eroded.

Mr Gardiner said that there was little room for companies to pass on the higher manufacturing costs to the consumer in the form of higher retail prices. Aggregate demand is already weakening under the pressure of the rise in borrowing costs, and companies are likely to be reluctant to raise shop prices for fear of losing market share.

Lawson decides to ride out accident waiting to happen

Simon Holberton and Patrick Harverson look at sterling's fall

MR Nigel Lawson, the Chancellor of the Exchequer, probably thought he had taken the decisive - if unpopular - step last week when he raised base rates to 15 per cent. Yesterday, on the eve of the Conservative party's annual conference, with the pound being savaged by the foreign exchange markets, he may well have asked himself what he has to do to prop up sterling.

Last week's rise in interest rates was about preserving sterling's strength and bearing down on still excessive demand in the UK economy. But by yesterday morning, the foreign exchange markets had calculated that Mr Lawson would not want to risk throwing the economy into almost certain recession by pushing interest rates higher. He seems to have decided to ride out the latest storm.

As Mr John Sheppard, economist at Warburg Securities, said, even higher rates were not seen as an option, not only for political reasons, with the Tory Party conference in Blackpool this week, but also because "you cannot just continue to put interest rates up when they are not affecting the currency."

The fall in sterling was an accident waiting to happen. Traders and analysts have felt for some months that the pound was overvalued and would fall.

Two possibilities were discussed. One was that the pound would fall when the economy cooled sufficiently for the Treasury to cut interest rates to stimulate growth. The other was that the market would see the top of the interest rate cycle and simply dump the pound, hoping to make money as it fell.

Yesterday the latter occurred, accompanied by that now familiar talk of the pound being a "one way bet." A banet of foreign exchange trading is: if you can't buy it, sell it.

Weekend press reports of a rift between Mr Nigel Lawson, and Sir Alan Walters, the Prime Minister's economic adviser, reinforced the feeling of many in the foreign exchange markets yesterday morning that the Government would not stop the pound from falling below DM3.

The market was also worried

by the Labour Party's lead in the opinion polls. Although the election is still some way off, traders gambled that the Government would not countenance another rise in interest rates while it lagged so far behind Labour in the polls.

In any event, currency strategists did not believe another rate rise would help the pound. Mr Ken de la Salle, head of foreign exchange at NatWest, said: "One more point on interest rates would not turn sterling." Only organised intervention in the markets by world central banks would help the pound.

Another worry was that 15 per cent interest rates might push the economy into recession. The economic fundamentals are running against the pound. In particular, the market is worried about the trade deficit, and it has not taken to Mr Lawson's line that privately financed trade deficits do not matter.

"No one liked Lawson's Nervo act after the last trade figures came out. His peddling of the idea that the deficit does not matter smacked of complacency," remarked one currency analyst.

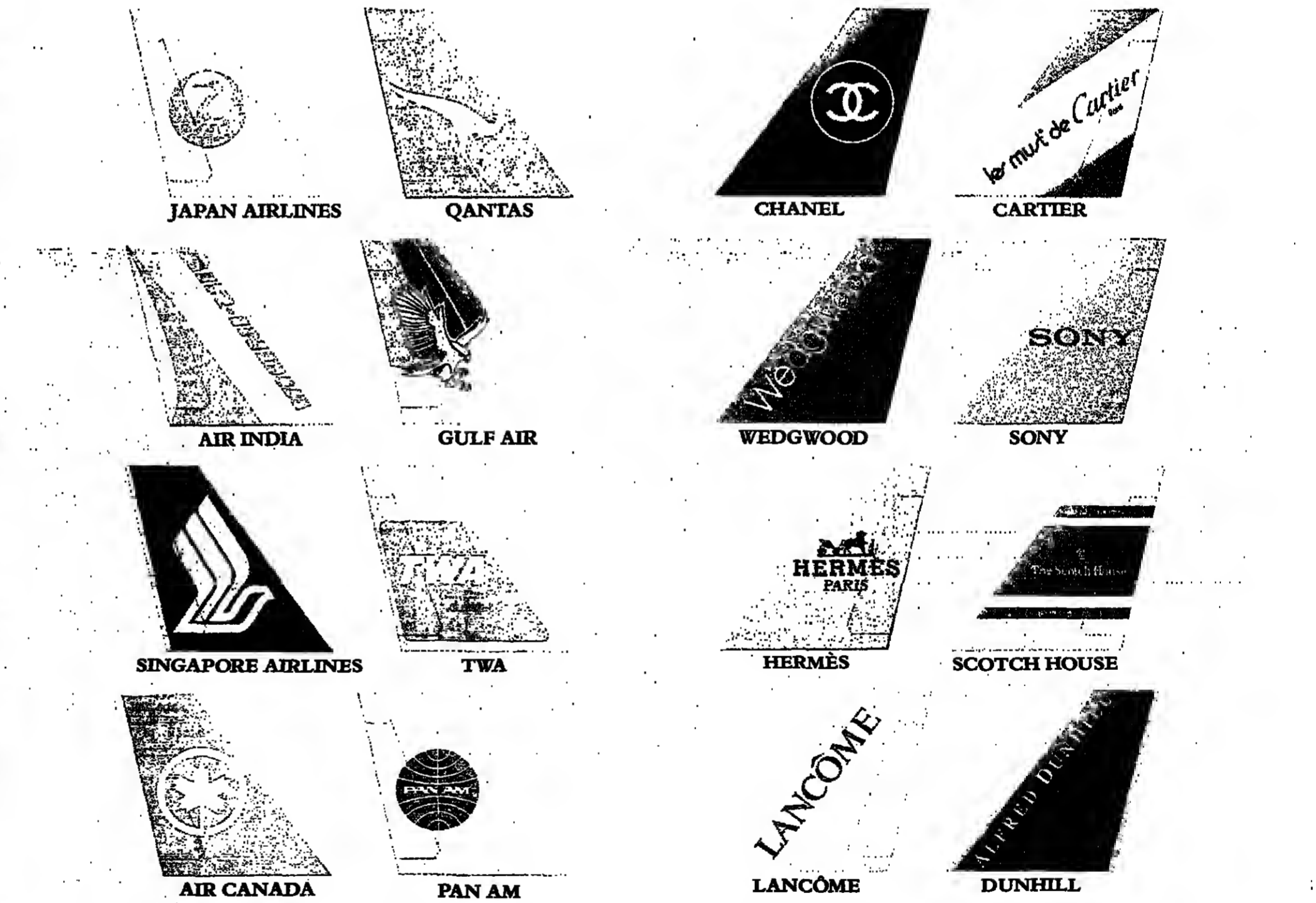
The coherence of policy on the pound and interest rates was also being questioned. As one analyst put it: "Last year the Bank of England tried to stop sterling as it went up through DM3 and had interest rates down at 7.5 per cent. Now the Bank is trying to stop the pound going down below DM3 and interest rates are at 15 per cent. That's a hell of a change of policy."

But there was also a growing sense in financial markets that the Treasury had abandoned its flirtation with exchange rate targeting, or at least put it on hold for the time being.

The Bank of England's intervention yesterday was not an attempt to stop the pound falling through DM3 but to maintain a semblance of order in the market and indicate that the Government still took an interest in the level of the currency.

Mr Derek Scott, UK economist at BZW, said: "There are some in the market who think that authorities have in some sense let the pound go. It is only a matter of time before the market has another crack at the pound."

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UK NEWS

Bosch leads the march to the land in the West

Anthony Moreton looks at a raft of investment decisions bringing jobs to the principality

Three weeks ago the contractors moved onto a 200-acre site at Miskin, just outside Cardiff in South Wales, and laid the first foundations for the Bosch motor plant that will, by 1995, be turning out 5m alternators a year for the motor industry.

The frame of the building should be completed by February and Dr Helmut Oberitz, technical director of the West German company's automotive equipment division, said at the group's headquarters in Stuttgart last week, that exactly a year later the first of a new generation of compact alternators would start to come off the production line.

Since Bosch confirmed last April its decision, first revealed in the Financial Times, to build in Wales a raft of investment decisions bringing jobs to the principality for expansion or new investment.

STC has chosen Cwmbran, outside Newport, for a R & D centre. Toyota is spending \$10m on an engine plant at Deeside in North Wales, and Race Electronics is joining forces with Japan's Senken Electric to set up a plant in Aberdare, in the South Wales valleys.

This morning, Dow Corning is expected to add to this good news by announcing a multi-million pound project at its Barry works, also outside Cardiff.

Dr Oberitz sketched out a future in Wales for Bosch that offered the possibilities of expansion far beyond what the company now has in mind.

The DM320m investment should employ 570 employees by the time the plant is fully running in 1991, 400 of them on the production line, and it is expected that expansion of output will take the number to 1,000 by 1995.

Bosch, however, has bought a far larger site than it needs at the moment, Dr Oberitz stated. "We shall be building two halls, each of about 120,000 sq ft, as well as offices and an energy supply centre for our immediate needs and we have taken enough space to build another four halls. Any expansion beyond our present commitment, though, will depend on the success of the present venture and the needs of the company."

The Welsh plant will make a compact alternator, promised to provide between 20 and 70 per cent more power than the present units, and will be the only source of this equipment within the company.

Three sizes of alternator will come off the lines: a small one, up to 60amps; a medium-size one up to 90amps; and a large one up to 140amps.

Cardiff was only chosen after a year-long search by Bosch into a large number of sites. Bosch's strategy has been to move its production nearer the client.

Although the company serves just over half its 24,700 incomes from outside Germany only 18 per cent of the income comes from goods produced beyond its borders. Getting nearer the end customer has therefore become a central tenet of its strategy.

Bosch concentrated its year-long search for a site for a new plant initially on low-wage, advanced-economy countries and the haul quickly came to a choice between Spain, where Bosch already has a number of plants, and the UK, where it has none.

Within the UK the close rapport developed between Mr Marcus Blyden, chief executive of Bosch and Mr Peter Walker, Secretary of State for Wales, played an important part in the decision to choose Cardiff rather than the alternative.

Growth within the British motor industry was also an important factor. The company expects present output of around 1.1m vehicles a year to grow to more than 2m.

But what really swung the decision towards Wales, according to Dr Oberitz, was the way in which decisions were reached in the shortest possible time. "We had enormous co-operation in the paperwork from a number of bodies," he said, "especially from Welsh Development International. This enabled us to push ahead at

top speed. The co-operation we had on this side was crucial in our decision-making."

Wales also gained from its quick communications and an abundant supply of good labour. "Our products are distributed all over the world and South Wales has a transport system which can move goods quickly," said Mr Joachim Burkhardt, project manager at Miskin.

Another factor was the easy availability of labour in the area. Within a dozen miles of the Bosch site are companies such as Sony, National Panasonic, Race Electronics, AB Electronics, all having good, skilled labour.

The ability of these companies to attract the necessary skills told Bosch it could also find the sort of workers it wants. About one in 10 of its employees are expected to have a university or university-level education.

Bosch refuses to be drawn on whether it will go for a single-union deal, though that would be no trouble in South Wales. Plenty of companies have already gone down this path.

But the word "flexibility" features prominently when discussing its method of operations, pointing in the direction of a single-union deal.

Dalles most of its neighbours Bosch will predominantly employ men, a welcome feature in a part of the world where job creation has helped women but where layoffs have largely been at the heavy, men-embodying end of industry.

"Wales is now very important to Bosch," Dr Oberitz added. "It is our first manufacturing venture in the UK and it will make a point that is critical to the future of our automotive components business."

Bosch is confident it has made the right decision and that we shall be part of the Welsh, business and social scene for many years.

That is a sentiment that Dow Corning is also expected to reiterate this morning.

Tories 'may lose 12% of vote' over NHS policy

By Alan Pike and John Mason

UP TO 12 per cent of Conservative supporters could switch their votes if the Government continues with its planned reforms of the National Health Service, according to a survey published yesterday.

The findings of the poll, carried out for the opposition Labour Party by Mori, came as health and social services charities warned that the health service would face an uncertain future if the Government implemented the reforms without public or professional support.

The charities said it appeared that the Government regarded the model patient as "a person in a supermarket with time and money to spare in a health care system." Many patients did not come into this category. The elderly, the disabled, ethnic minorities, the homeless and families with large numbers of children already had difficulty finding general practitioners willing to accept them and this problem could increase under the Government's proposals.

Competition in health care meant that there would be winners and losers. The losers were likely to be from the most vulnerable groups.

The Mori survey found that 62 per cent of those questioned, including non-Tory voters, thought the reforms would lead to poorer standards of health care.

Mr Robin Cook, health spokesman for the opposition party, said the reforms could lose the Conservatives 1.5m votes and many marginal seats at the next election. Of 575 Tory voters questioned, 82 per cent would be happy with the NHS in its current form if it were properly funded and 77 per cent thought it was under-resourced - 43 per cent thought the reforms would lower treatment standards against 38 per cent who thought standards would rise.

If the reforms went ahead, 2 per cent said they were certain to switch votes away from the Conservatives, 3 per cent were very likely to switch and 7 per cent fairly likely to switch.

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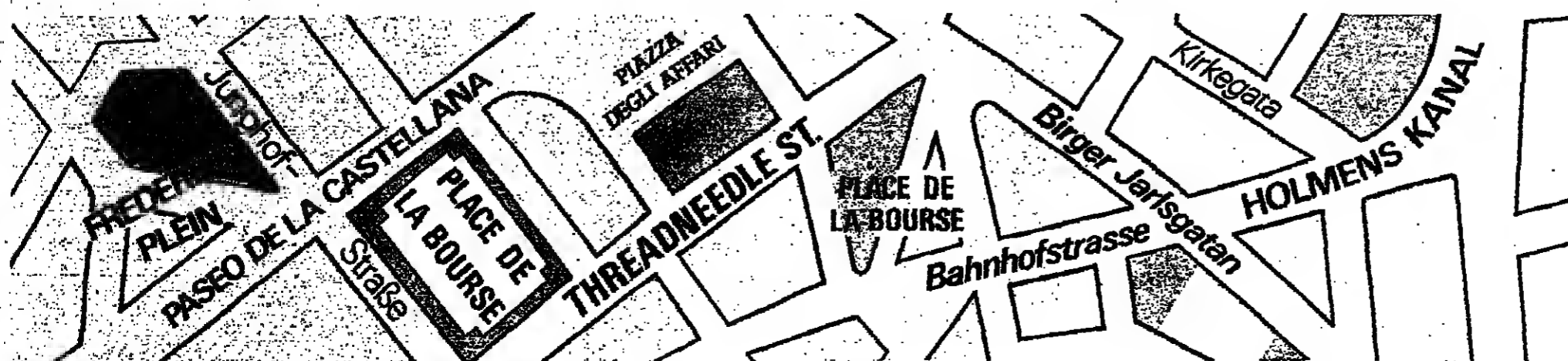
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LEGAL COLUMN

# US Treasury loses tax credit

REGINA v INLAND REVENUE COMMISSIONERS, EX PARTE CAMACQ CORPORATION AND ANOTHER

Court of Appeal (Lord Justice Dillon, Lord Justice Lloyd and Lord Justice Farquharson): August 3 1989.

The Inland Revenue may revoke tax credit clearance given in respect of capital share dividends payable to a foreign Treasury by a UK company, if it doubts it was right to have given such clearance in that sovereign immunity from tax may not apply, and the foreign Treasury would be benefiting from an artificially produced tax credit not available to other shareholders.

The Court of Appeal so held when dismissing an appeal by Camacq Corporation and Cambrian and General Securities plc, from Mr Justice Kennedy's decision refusing their application for judicial review of an Inland Revenue decision to revoke a tax credit authorisation.

LORD JUSTICE DILLON said that at the end of 1988 Camacq, an American company, made a public offer to acquire the whole share capital of Cambrian, a British company.

According to US tax law, unless Camacq could acquire not less than 80 per cent by August 3 1989, Camacq and its parent company might face US tax liabilities equivalent to \$10m.

Camacq acquired 70 per cent. The remaining 30 per cent included 20 per cent held by an escrow agent for the benefit of the US Treasury as part of a penalty levied against a US criminal.

Camacq wanted to acquire those shares, but could not increase the public offer price, which the escrow agent had not accepted, because that would be contrary to Takeover Panel rules.

The parties negotiated alternative arrangements by which a dividend would be declared by Cambrian on its capital shares, payable out of capital profits. On payment of the dividend to the escrow agent he would become entitled to tax credit equivalent to the advance corporation tax payable by Cambrian.

That would increase the money received by the escrow agent for the shares by some \$3m.

The Takeover Panel approved the proposal as not involving any infringement of the Code.

The contract negotiated between Camacq and the escrow agent was conditional on Inland Revenue clearance for him to receive the tax credit.

Payment of tax credit to a foreign state could be achieved either by the state's application to the Revenue after receipt of the dividend; or by Revenue authorisation to the company to pay the amount of the advance corporation tax (which was necessarily equivalent to the amount of the tax credit) direct to the foreign state with the dividend, thus by-passing the procedure of payment to and claim from the Revenue.

The latter procedure was covered by Regulations made in 1973. The arrangements were made at the Revenue's discretion and could be revoked at any time.

On June 8 1989 the Inspector of Foreign Dividends authorised Cambrian to pay the proposed dividend to the escrow agent with the amount of the tax credit.

On June 29 the Inspector learned that Cambrian was proposing, on the following day, to send a circular letter to capital shareholders announcing the dividend. He had doubts as to whether in the peculiar circumstances it was appropriate to pay tax credit to the escrow agent.

In view of the urgency, as the circulars were to be sent the next day, he decided to revoke the authorisation.

Cambrian and Camacq applied to the Divisional Court for judicial review. Mr Justice Kennedy refused to quash the Revenue decision. Cambrian and Camacq appealed.

Proceedings relating to income or advance corporation tax were outside the scope of the State Immunity Act 1978 (see sections 1, 11 and 16).

Where a company resident in the UK paid a dividend, it became accountable for advance corporation tax, and the recipient of the dividend was entitled to tax credit equal to the amount of the tax (see sections 20 and 231 of the Taxes Act 1988).

Section 232(3) of the 1988 Act provided that where a dividend was income of a foreign government, that government was entitled to a tax credit to the

same extent as a UK resident. Section 231(3) provided for the tax credit to be set against income tax. That was qualified, however, by section 235, by which exemption from tax did not extend to dividends arising from pre-acquisition profits.

The purpose was to prevent a tax avoidance device under which shares on which dividend was to be paid, were transferred so that full tax credit could be recovered by the transferee, though attributable to pre-acquisition profits on which the transferor could not have claimed credit.

Inland Revenue practice, as set out in its affidavit, was that a foreign government, though not normally entitled to relief under a double taxation agreement, might be entitled to tax credit by virtue of section 232(3) of the Act. Where it enjoyed sovereign immunity the government was not subject to UK income tax on the dividend and was therefore entitled to have the whole of the tax credit.

The difficulties in the present case stemmed from the unusual nature of the dividend.

It was apparent to the Inspector that the escrow agent had rejected an earlier offer by Camacq to purchase the shares, which would have netted him approximately \$3.5m; that the present transaction was stated specifically to be structured to net him \$4m; and that the difference between the two figures was wholly or mainly attributable to the tax credit of approximately \$3m.

In the circumstances the Revenue doubted whether the escrow agent had the benefit of sovereign immunity. It revoked the authorisation. It drew his attention to the fact that the dividend was to be paid appeared to be pre-acquisition profits.

It said the dividend seemed to have been artificially arranged to take advantage of UK tax rules in circumstances in which, under section 235 and article 10 of the US/UK Double Taxation Agreement, the tax credit might not be available to other shareholders.

In those circumstances there was no doubt the Revenue had good cause to revoke the authorisation.

There was no binding rule that it must give consent to payment of the amount of tax

credit by the company direct to a foreign sovereign.

It had given such authorisation, but on further matters coming to its notice which made it doubt whether it was right to have done so, it was entitled to revoke it.

In view of the imminent sending out of the circulars, it was bound to act promptly.

The appeal was dismissed.

LORD JUSTICE LLOYD agreed said that the reason given for the cancellation was that the Revenue was doubtful whether sovereign immunity applied where a foreign state was obtaining the benefit of an artificial arrangement designed to produce payment of a tax credit in circumstances in which neither a UK nor a US taxpayer would have benefited.

Mr Donaldson for the companies argued that a doubt in the Inspector's mind was not enough. He said the Inspector was obliged to express a view one way or the other. If he had, the court would be entitled to examine that view so as to see whether it was correct in law.

That argument was not accepted. If the Inspector had never given his original authorisation on June 8, he could not have been compelled to do so by way of judicial review.

If he had expressed a doubt at that stage there was nothing the two companies could have done about it.

The position was not changed by granting the June 8 authority, so far as judicial review was concerned, unless the authorisation had created some sort of estoppel. That was not asserted.

The doubt created in the Inspector's mind by further information received subsequent to June 8, was in itself sufficient reason to justify the cancellation.

LORD JUSTICE FARQUHARSON agreed with both judgments.

For the companies: David Donaldson QC and Andrew Green (Freshfields). For the Revenue: Ian Glick QC and Timothy Brennan (Inland Revenue solicitor).

By Rachel Davies Barrister

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# "I don't agree with the White Paper at all on the idea of cash bids for television franchises."

Rupert Murdoch 25.8.89.

Rupert Murdoch, most ardent of free marketeers, said in his recent speech at the Edinburgh Television Festival that he was against the auction of the ITV franchises as proposed by the Government's White Paper on Broadcasting.

He is just one more in the long line of those who have stood up and declared their opposition to this proposal.

To mention but a few:

which will benefit only the Treasury."

*Mrs Jocelyn Hay, Voice of the Listener.*

"Even in the US, broadcasting licences have been awarded, not auctioned off, by the Federal authorities. France sold off its first national television channel TFI, to the private sector in 1987, but did so after fixing a price and then choosing between those who were prepared to pay it."

*Financial Times.*

"Out of uncertainty and ignorance, therefore, there is a good chance that some bids will be pitched uneconomically high.

## If he's not for it, who is?

"Criticism of the proposals has been almost universal. It has come not only from the industry but also from the Consumers' Association, the Peacock Committee and even most of Fleet Street. If enacted, the proposals will be bad for business, the consumer and Britain's image abroad."

*Dr Patrick Barwise, London Business School.*

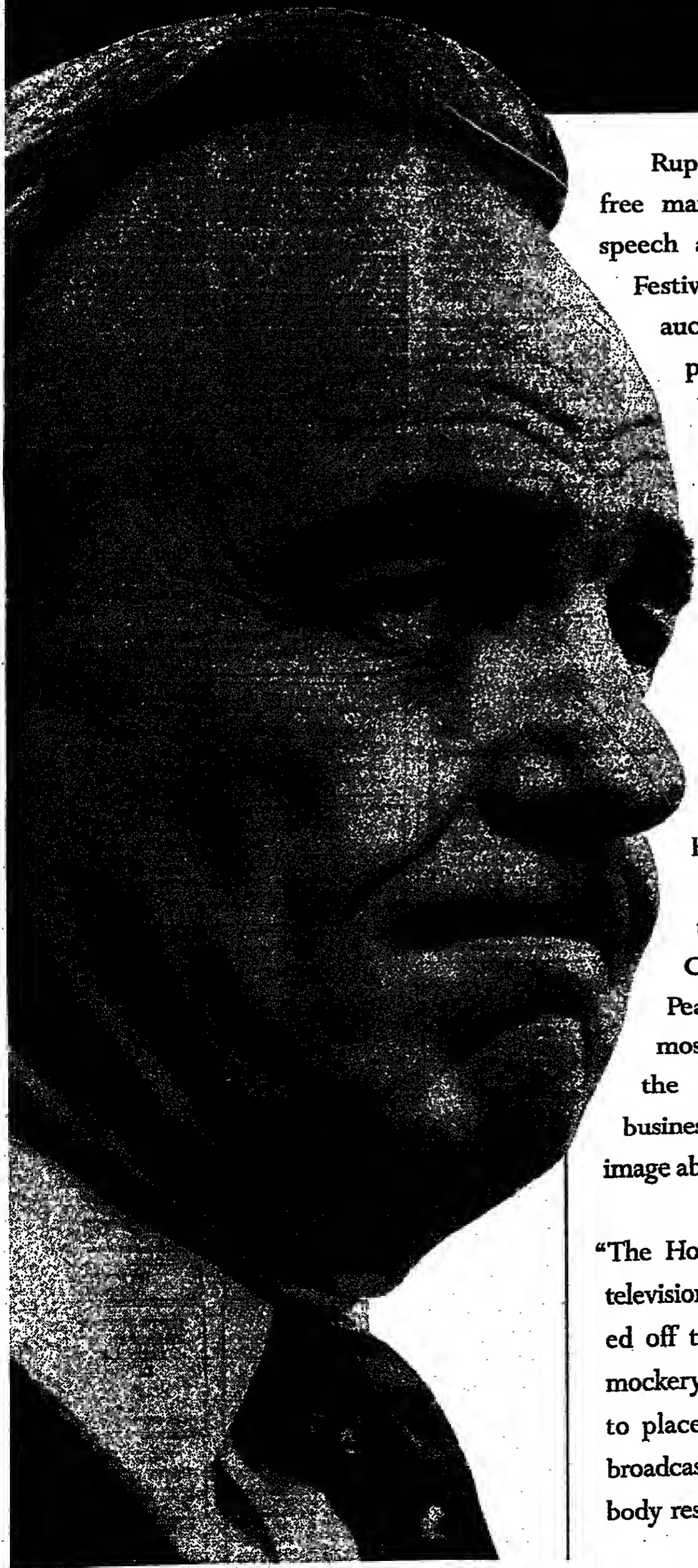
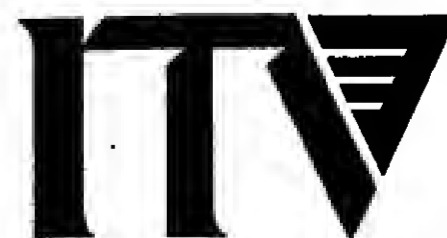
"The Home Secretary's statement that television franchises are to be auctioned off to the highest bidder makes a mockery of the Government's claim to place the viewer at the centre of broadcasting policy. Not one consumer body responded favourably to this idea

And that is not to dismiss the 'power and prestige' bids from those who simply want to hold a franchise, at whatever cost. There will be some of those."

*Kleinwort Benson, Merchant Bankers.*

"We urge the Government to look very carefully at the implications of the proposed [tendering] system. We would regret it if the high cost of acquiring a TV franchise on Channel 3 discouraged the licensees from providing a high quality service which attracted viewers of all categories and ages."

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LETTERS

Clarity in foreign acquisitions rules in US

From Messrs Joel F. Brenner and Irving M. Pollack. Sir, Frank Cooper ("When foreign owners succumb to control...")

either in a defence company or in a company with only a marginal interest in defence work. These cases are unlikely to disturb the regulators...

however, even substantial national security concerns have been dealt with leniently by the regulators in ways that satisfy overseas management.

programme and avoid costly unsuccessful acquisition attempts. These improvements would be particularly welcome since some US firms can be expected to acquire a defence subsidiary for the sole purpose of making a foreign take-over more difficult.

Advertising's effect on drinking

From Mr P. Mitchell. Sir, Christopher Parkes's review of research on advertising ("The influence of advertising...")

on under-age drinking. It uses a very limited, one-time sample of 150 youngsters from one Scottish city. Hardly a representative or in-depth analysis.

Planning

From Mr Dennis J. Fowle. Sir, Christopher Patten's proposed changes in the planning guidelines should be welcomed by all (save the developers) who live in the overcrowded south east.

Interest rates and sovereignty

From Mr Stanley Crossick. Sir, The UK Government argues that participation in monetary union as proposed by the EC is a derogation of sovereignty.

Working week

From Colonel H.A.J. Jordan. Sir, There is more than a little irony in the figure of 24,000 threatened job losses which Mr Gavin Laird quotes in the context of Ferranti and his accusation of media double standards is ridiculous ("Workers' control" of top companies, rejected, October 3).

Current account deficits

From Professor M. Artis. Sir, It is not Professor Thirlwall (Letters, October 4) allowing himself to be sidetracked on the issue of current account deficits? In a world of highly integrated capital market financing, such deficits are not likely to be a problem for developed countries which are within their solvency constraints.

Shoes in East Germany

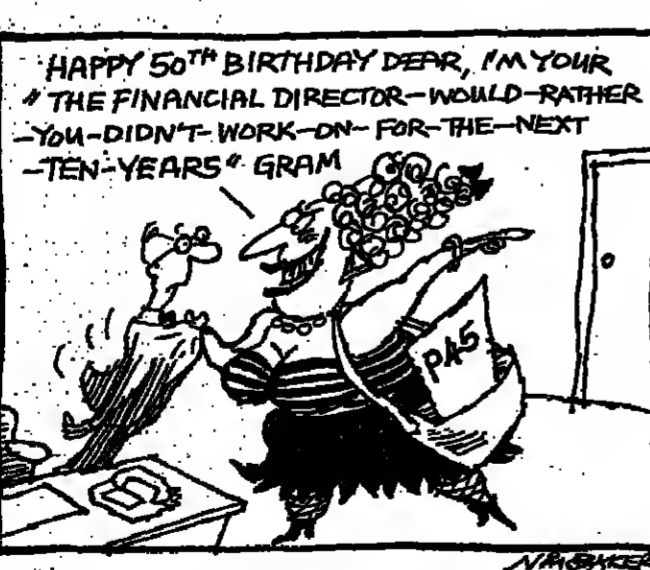
From Mr J.C. Foster. Sir, David Goodhart's article "A step ahead of other manufacturers" (FT Survey, October 3) refers to the agreement I signed at the Leipzig fair in my capacity as managing director of United Machinery Group Ltd (UMG).

Leather goods in the UK

From Mr J.T. Henwood. Sir, Having survived an import penetration level of over 60 per cent in the supply of small leather goods, handbags and belts, the British leather goods manufacturing industry should now be looking forward to a period of consolidation in which opportunities can be created for increasing market share in the UK.

The pensions debate: when to retire and how much it will cost

From Mr Alan Smallbone. Sir, Your leading article ("A sexist policy on pensions," October 2) while referring to the "social reality of de facto earlier retirement ages," makes only oblique reference to the reasons for this under the description "corporate redundancy schemes."



question or up, but surely this question was effectively answered earlier this year when it was enacted that the state pension would no longer be a "retirement" one, but become an "age" one, divorced from retirement? The only future link, therefore, between pension age and retirement (full or partial) should be to set the age no higher than that at which a significant number of contributors are either retired

by their employers or feel compelled to retire as a consequence of personal circumstances. That clearly points to 60, subject, perhaps, to a qualifying years condition - 44, for instance - to begin with.

36 Orchard Coombe, Whitechurch Hill, Reading, Berks. From Mr Stephen Wynn. Sir, Your leader concludes "the male of the species deserves a better deal."

FOREIGN AFFAIRS

Time to dust off the relics

Robert Mauthner argues for an urgent reappraisal of the Commonwealth

The Commonwealth, that quarrelsome hotch-potch of nearly 50 states, linked mainly by a common British colonial past and language, will be gathering for the biennial joust between its leaders in Kuala Lumpur next week, wondering, as usual, where it is going.

Today's relics, of course, were yesterday's useful pieces of furniture. Forty years ago, Britain may have been exhausted by its wartime efforts, but it was still one of the great powers and, with the exception of the self-governing Old Dominions and India, which achieved independence in 1947, its Empire was still largely intact.

'The Commonwealth begins to acquire almost the status of a Grade One listed building'

wealth - Britain was already making formal moves to join the European Community. Though, thanks to the late President de Gaulle of France, it took another decade before Britain could force the door of the EC, the writing was on the wall. Theoretically, Britain's foreign policy was still based on the three interlocking circles of the Commonwealth, the US and Europe. It soon became clear during its EC entry negotiations, however, that Britain's traditional patterns of trade based on cheap food imports from the Commonwealth would change radically as the result of acceptance of the EC's membership terms.

least equally important - the threat to the environment, famine and drought in Africa and Asia, the growing world refugee problem, human rights and political freedom - which have been neglected by the Commonwealth while Britain and the other members squabbled over South Africa.

That subject has dominated two full summits in Nassau and Vancouver and one mini-summit in London over the last four years without budging Mrs Thatcher from her position that official sanctions would not be effective in changing the political situation in South Africa and would harm the black population. The rights and wrongs of that view have been the subject of endless public debate. But a stalemate over means should not be allowed to obscure the broad agreement on at least short-term ends, and should certainly not be permitted to bring the proceedings of the Commonwealth virtually to a halt for several years.

It would also help the Commonwealth's credibility if it matched its concern about South Africa by paying similar attention to the democratic and human rights shortcomings within some of its own ranks, where single party states and restrictions on the freedom of speech and the media abound. The rule that the internal affairs of member states cannot be discussed, even in the case of flagrant transgressions of the Declaration of Principles adopted by the Commonwealth Summit in Singapore in 1971, clearly weakens any positions the organisation takes on situations in other states.

Twenty-five years ago...

Mods and rockers fought on the beach at Clacton... John Steed and Mrs. Peel joined forces against evil as 'The Avengers'... West Ham froze out Preston North End to take the FA Cup... Treasury officials defended the pound by borrowing £1,080 million...

...and Britain announced the first licence awards for North Sea oil and gas. Times change. Occasionally for the better. Today, the pound is holding its own. And the offshore energy industry has grown to encompass a workforce of nearly 100,000. Backing them up will be an investment over the next four years of some £27 billion to ensure that Britain's North Sea prosperity can be counted upon well into the next century.



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FINANCIAL TIMES

Tuesday October 10 1989

PLUMB CENTER WOLSELEY The name behind the name.

REFORMERS TAKE OVER PARTY PRAESIDIUM

Hungarian Socialists embrace democracy

By John Lloyd and Judy Dempsey in Budapest

THE HUNGARIAN Socialist Party last night completed its formal transformation from a Communist party into a western-style socialist party committed to pluralism.

and a radical among the reformers, crossed swords on whether or not some link between the party and the state be preserved.

ments of this Congress thus include the creation of a new party pledged to pluralism, constitutional rule and a market system.

Communists, must give an account of the corruption alleged to be endemic in its property and other holdings.

EC takes step nearer pact on excise taxes

By David Buchan in Luxembourg

FINANCE MINISTERS of the 12 European Community states yesterday agreed on a means of indirect tax collection to allow the abolition of fiscal frontier checks inside the Community from the start of 1993.

Mr Peter Lilley, economic secretary to the UK Treasury, said countries had preferred "not to commit themselves to a new system designed to take effect by January 1 1993."

loss of trade to neighbouring countries with lower VAT rates. Ministers, however, appeared near agreement on a package of measures designed to minimise the risk that tax-ohy citizens will abuse next year's generalised lifting of EC exchange controls.

Rover plans luxury car for US markets

By John Griffiths in London

ROVER GROUP, the British motor manufacturer, is developing a high-performance, luxury car aimed primarily at North American markets.

The new car, to be launched in 1992, is being designed independently of Honda - the Japanese car company which is soon to take a 20 per cent stake in Rover - is aimed at taking Rover deeper into the prestige car market.

European accounting standards proposed

By David Waller in London

THE IDEA of establishing a Europe-wide mechanism for setting accounting standards has been suggested by the UK's three main accounting bodies.

had the full support of the big firms. From the international perspective, the profession's official line is that it favours harmonisation of standards on a global but not a regional basis.

Committee. The pan-European body envisaged in the document would seek to promulgate international standards, with monitoring and enforcement left to the national bodies.

UK proposes merger controls compromise

By Guy de Jongheres in London and Lucy Kellaway in Brussels

BRITAIN IS to propose a "two-tier" system of European Community merger control in an effort to avert stalemate over the European Commission's long-standing demand for power to vet large deals in advance.

The British Government believes that division between four review of EC merger control policy subject to unanimous approval, rather than the qualified majority voting.

nity gross national product, and make a similar four-year review of EC merger control policy subject to unanimous approval, rather than the qualified majority voting.

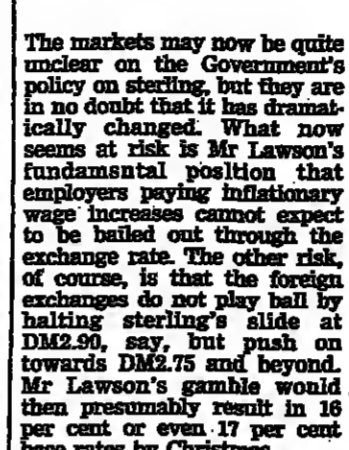
WORLD WEATHER table with columns for location, temperature, and weather conditions.

Sterling falls to below DM3

Officials stressed that last week's rise in interest rates had amounted to a significant tightening in monetary conditions. The Government did not have a specific target for the pound although it desired a firm exchange rate even after yesterday's falls, they said.

THE TEN COLUMN

Sterling drops its pilot



Government Bonds Long bond yields 10% 9% 8% Mar 1988 Oct

The markets may now be quite unclear on the Government's policy on sterling, but they are in no doubt that it has dramatically changed. What now seems at risk is Mr Lawson's fundamental position that employers paying inflationary wage increases cannot expect to be hedged out through the exchange rate.

Jaguar's articles, it might be less trouble to buy through the market. And above all, if GM is not in a position to protect its commercial arrangements through poison pills, its only long-term safeguard against hostile action from Ford is to own Jaguar outright.

temptation of vastly bumping up its revenue forecasts yesterday, despite the depressing news last week about the cost over-runs. There is so much that is incalculable about future transport levels - the response of the ferry operators and the airlines, the prospects for the high-speed rail link, the extent to which, like the M25, the tunnel creates its own demand - that forecasts for the year 2003 are virtually science fiction.

Mortgage rates

In a rather perverse way, the one percentage point rise in the Halifax's mortgage rate is good news for borrowers. It shows that the world's biggest mortgage lender is continuing to subsidise borrowers at the expense of its investors, while the speed with which it has set its new rate means that most other societies will follow its lead.

Saatchi & Saatchi

Given the number of fires in which Mr Silvio Berlusconi has been, it is tempting to play down his appearance as a shareholder in Saatchi. Shortly before he spent around £5m on Saatchi shares, he had put three times that into acquiring 2 per cent of Bouygues, the French construction and television conglomerate; it may just be Anglo-Saxon chauvinism that finds the Saatchi purchase more interesting.

Eurotunnel

It is to Eurotunnel's credit that it did not fall prey to the

Advertisement for 3i Corporate Finance with headline 'Is your company worth a great deal?' and contact information.

# FINANCIAL TIMES SURVEY



Taiwan is confident as it prepares for its first general election since the ending of martial law. The

question is whether there is enough respect for democracy and traditional values to absorb the tensions released by new political freedom, writes John Elliott

## Challenge of growth

TAIWAN is an enigma. It is not generally recognised as a sovereign state but, as the world's 18th largest trading nation, it is forcing itself into the international arena. Taipei's stock exchange is sometimes the busiest in the world, but its casino-like speculation is based on only 177 stocks and it does not play a significant role in funding the economy.

Against this, critics point to the appreciation in the value of the New Taiwan dollar by about 50 per cent in the past four years against the US dollar and an economy which, they say, is overheated, with worrying signs of growth running out of control.

But such a catastrophe does not seem imminent on this island of only 20m people who have generated foreign exchange reserves of around \$75bn and who enjoy an annual per capita income exceeding the official figure of about \$7,000.

The government pursues an 'unreal' foreign policy by officially calling Taiwan the Republic of China and by claiming sovereignty over mainland China, which in turn regards Taiwan as a recalcitrant province. There are no official dealings with Peking.

yet two-way trade last year totalled at least \$2.5bn, and substantial direct investment has been made on the mainland. Tens of thousands of Taiwanese were visiting the mainland every month over last year, but this exchange has been stanchied by the events of June 4 in Tiananmen Square.

Now Taiwan is about to hold its first ever democratic general election. But the result cannot oust the ruling Kuo mintang (KMT) government because about 190 elder legislators elected in 1947 on the Chinese mainland cling to power, perpetuating their dream that Peking is an illegal regime.

For such a place to be emerging, not only as one of the region's economic tigers, but also as a highly adaptable nation, is one of the Orient's latest great enigmas. The question now is whether there is sufficient flexibility, patience, and respect for democratic authority to sustain the economic growth - or whether Taiwan will fall back into the familiar Asian cycle of growing social unrest, riots, political repression, and even military dictatorship.

Located about 100 miles off the mainland of China, Taiwan's future is complicated



Two faces of economic growth: a skilled and reliable workforce; and traffic congestion in Taipei, where the air is thick with poisonous exhaust fumes

# TAIWAN

Taiwan sees democracy as the goal.

Mr Nelson Chang, 38-year-old president of Chia Hsin Corporation, a leading private sector company, is not untypical when he says: "I am Chinese and I want to see one China - but not within my lifetime. Before that the mainland would not be ready in terms of a free economy and political system."

Taiwan's people basically want to keep Peking at arms length so that they can remain free to develop their prosperity. Although 17m of the 20m population have come from, or are descended from, mainland families, two other cultures have played an important role in blending the old Chinese Confucianism into an economically successful ethic for a people that now thinks in US dollars.

One came with the Japanese who ruled from 1895 to 1945. Japanese colonial buildings in the capital of Taipei still proudly house important government institutions, including the Presidential Palace. The other culture is from the US which has actively supported Taiwan for the past 40 years and whose universities have educated and spawned the latest generation of top leaders.

For most of the past 40 years Taiwan has been ruled by an ageing KMT leadership under a martial law regime. Free enterprise was however encouraged to such an extent that economic growth has averaged 8.88 per cent a year since the early 1960s.

But the spectacular economic breakthrough has only come in the past two or three years when the proceeds of years of successful export growth generated massive cash reserves. Little money flowed out of Taiwan, initially because of the government's protectionist policies, and more recently because of the strength of the Taiwan dollar.

The surplus cash formed the basis for rampant speculation on the stock exchange and property market, fuelled by underground finance companies which flourished because of out-dated government financial controls. The cost of living has soared and Taipei property prices have doubled within a year or two, putting new homes out of the reach of young married couples. Little money has gone into industrial development.

Rapid political and social changes began three years ago when the late president, Mr Chiang Ching-kuo, son of

Chiang Kai-shek, began a liberalisation process. They have been continued by Mr Lee Teng-bui, who succeeded him when he died early last year, and by a new prime minister, Mr Lee Huan, who was appointed in May.

Martial law was lifted two years ago, permitting new political freedom and releasing forces which led to street protests, a rash of labour unrest, and a new militant concern about the environment.

Compounding the social changes, there has been a rapidly rising crime rate. There has also been a decline in the population's traditional work ethic as people have found it financially more rewarding to speculate on the stock and property markets.

"The most worrisome thing is that we have had this political democratisation, economic liberalisation and the social opening up, all coming to a confluence in a very brief period of two years," says Mr Fredrick Chien, Taiwan's top economic planner. "Therefore people are really enjoying this new found freedom and everybody would like to practice it to the maximum. That is what worries me. But I hope this will be temporary."

There is a risk that one day

soon, people will wake up and realise that they have worked hard for years and achieved nothing in real terms," says a foreign banker.

Compounding the problem is a lack of firm direction by the government whose ministers and top civil servants have not yet adjusted to the new open political system where opposition parties and other interest groups wield influence. This has been especially evident in the handling of underground finance companies and the stock market, where policies have been announced, then watered down. The government has also been less than firm on labour, the environment and other problem areas.

Some people view this as a sign that the government has lost control. Some even speculate about a reassertion of martial law by the still powerful and conservative military establishment, headed by 68-year-old General Han Pei-tsun, the veteran chief of general staff. Such a move could find sympathisers among the elders of the KMT, who are coming under increasing pressure to retire.

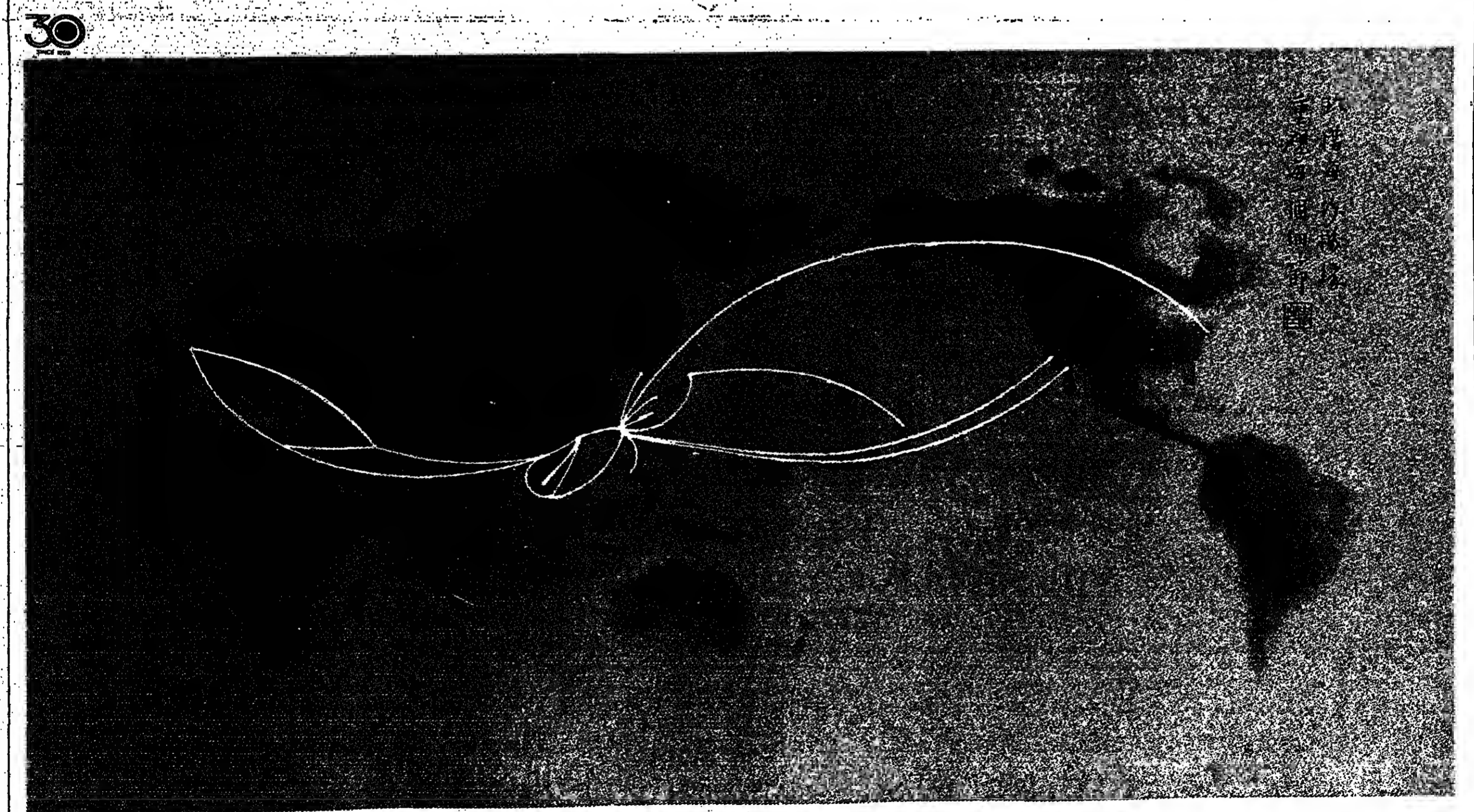
A more plausible scenario suggests that the government is having problems administering an open system with old-

### CONTENTS

Foreign affairs; Relations with mainland China; Politics	2
Economy; Trade	3
Banking; Stock market; Underground investments	4
High-tech sector; Overseas investment; ICI in Taiwan	5
Environment; Labour relations; Profits; Dr Fredrick Chien	6

### KEY FACTS

Population: 20m  
Area: 13,900 sq miles (64% forest)  
Population density: 583 persons/sq km  
Population growth: 1.2%  
Currency: \$1 = NT\$25.5  
\$1 = NT\$41.30 (Oct 1989)  
Foreign reserves: \$74.6bn (Oct 1989)  
GNP: \$119.7bn  
GNP growth: 7.3%  
Total two-way trade: \$110bn  
Exports: 55.7% of GNP  
Imports: 45.3% of GNP  
Leading trading partners: US, Japan  
Inflation: 3.5% (Sept 1989)  
Official Language: Mandarin Chinese  
Major cities: Taipei, capital; Kaohsiung  
All data 1988 unless otherwise stated



## Brush up on China Airlines

As the flag carrier for the Republic of China on Taiwan, China Airlines serves 20 major cities with a fleet of modern jet aircraft and a passion for making the business of flying a work of art.

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TAIWAN 2

John Elliott on how Peking's historic claims cloud any sense of independence enjoyed by the island

Overshadowed by the China syndrome

TAIWAN looks and feels like an independent country. It has a parliament, a president and prime minister, and its own currency, army and police. It also displays the self-sufficiency of a thriving self-sufficient nation.

Yet it is not independent, nor does it want to be, not in the immediate future - nor does it admit allegiance to any other country. But it enjoys an assumed but undeclared independence, and it has recently begun actively to use its growing international economic importance to improve its diplomatic recognition which at present is extremely limited.

The situation is complex because of the relationship with mainland China. The Nationalist government, which has ruled Taiwan for the past 40 years, has never recognised Peking's Communist regime.

It still formally insists it is the lawful government of the entire Republic of China and that it wants to reunite with the mainland under democratic rule.

But it knows most of the population are happy with the present de facto independence and it has accepted in recent years that reunification should be a long term target to be achieved by persuasion rather than military action.

At the same time, Peking claims sovereignty over Taiwan which it regards as a recalcitrant province. It wants Taiwan to follow Hong Kong back into formal acceptance of its rule under a system known as 'one country two systems'.

The three cardinal rules

TAIWAN has a rigid policy of "three nos" for its dealings with mainland China. In order to "safeguard its national interests and security," the Government "refuses to negotiate, compromise or make contact with the Chinese Communist regime," says government spokesman.

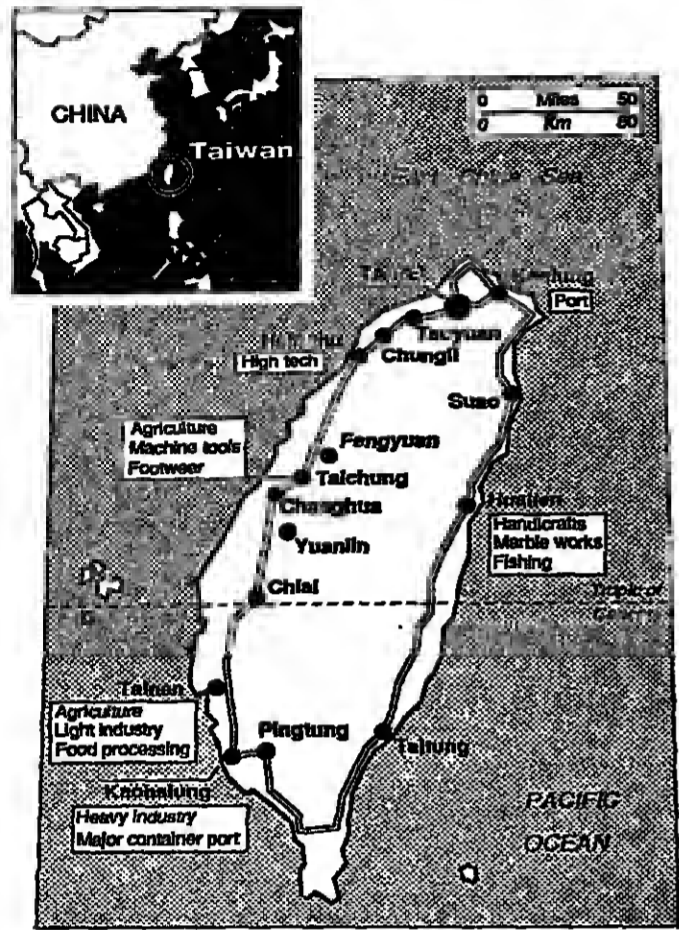
Indirectly routed postal and telecommunications arrangements were simplified in June to help people send facts about the suppression of the students movement to contacts on the mainland.

Legislation called the Two Regions Statute is now in its final stages of drafting in Taipei. This will regularise indirect trade and investment and it will also recognise official mainland documents relating to personal affairs such as birth certificates.

Members of Peking's Communist Party visiting Taiwan will also be exempted from prosecution as members of a rebellious organisation.

Such legislative changes are needed to underpin the status quo and to facilitate indirect contacts. But there is no softening overall. "Our policy is reunification of China under freedom, democracy and equitable distribution of wealth," says Mr Ying-jeou Ma, executive secretary of a government committee handling mainland policy.

He says the "one country two systems" idea being introduced for Hong Kong and Macao is "way different." It would put Taiwan "into the position of a local government" as a special administrative zone. "We cannot accept being downgraded to a local government, subject to the whimsical decisions of Peking," says Mr Ma.



With the rest of the world, Taiwan has to get on as best it can. It has what it calls "substantive relations" with 123 countries including the US, Japan, Australia and the UK.

The ruling Kuomintang Party also builds extensive contacts with foreign political groups, like Britain's Conservative Party, as a cover for government relations which cannot be conducted openly.

"We have been stressing that we want to improve our relations with most countries, and we do not mind how they conduct their relations with Peking, although unfortunately Peking tries to merge the two issues together," says Mr Chieu Jen Chen, a vice minister for foreign affairs, explaining how the Government has softened its stance in an attempt to achieve wider recognition through a policy of "diplomacy with flexibility or pragmatism."

He says that the Government's three-pronged policy is to maintain and develop relations with countries giving Taiwan full recognition, improve ties within the "substantive relationships" and upgrade Taiwan's role in international organisations.

Until the Tiananmen Square crisis in June, this was leading to improved, though indirect, relations between Taipei and Peking. His Shih-yei Kuo, Finance Minister, was the first member of the government to go to the mainland when she attended an Asian Development Bank conference in Peking in May.

In order not to upset this trend, Taiwan's criticisms of the June events were relatively restrained, though Peking has condemned Taiwan for siding with the students' democracy movement.

and form the capital's underground diplomatic community. They all avoid anything resembling normal open diplomacy. The head of a new UK visa office, which opened in June, formally retired from the British foreign service to take the job. Like other countries' officials, he clears visa approvals with London each day, then "processes" them with a London stamp, instead of issuing them himself.

Illustrating the flexible diplomacy, he operates under the banner of a long-standing Anglo-Taiwan Trade Committee office. He shares premises with a new Anglo-Taiwan Education Centre, funded by British universities and local UK companies, which helps students find college places.

Taiwan is a member of only 10 inter-governmental organisations including the Asian Development Bank. Mr Chen says that the number is small mainly because of Peking's blocking. Taiwan hopes soon to apply for membership of the

Indirect trade is allowed. It is usually channelled through Hong Kong whose customs officials put last year's two-way trade at \$2.7bn. In the first five months of this year the total was \$1.7bn, although there has been a

Advertisement for Hyatt Hotels in Taipei. Text: 'We're making a grand entrance in Taipei.' Includes logo for 'THE HYATT TOUCH' and 'GRAND HYATT TAIPEI'.

MR LIN Zheng Jie stood with his supporters by the door of a large assembly hall in central Taipei, shaking hands as people filed past him into a rather low-key political rally. Pop singers sang, activists delivered speeches, and actors performed skits - all against the ruling Kuomintang (KMT) political party and in support of the Democratic Progressive Party which forms the country's main opposition.

Poll test for the ruling KMT



The elections take place across the country on December 2 for more than 100 seats in the Legislative Yuan, or parliament, and for the posts of mayor in more than 20 provincial cities. These elections are important for several reasons. They are the first to be held both since martial law was lifted in 1987 when they were underground and illegal, commented Mr Antonio Chiang, a leading opposition figure and a magazine editor. But the fact that the DPP had managed to obtain a large government-run school hall for its rally showed that it had developed some political muscle in its two years of lawful existence.

that the KMT clings to its formal policy of being the ruling party for the whole of China and wants to maintain the present tightrope relationship with Peking. The DPP, which has been an uneasy coalition since it was founded in 1986 out of long-standing opposition groupings, is split. A moderate Formosa Faction wants gradual moves towards independence, but is basically interested in speeding up political reforms. A younger and more militant New Tide believes that independence is the primary issue and that it should be declared unilaterally, challenging Peking to carry out its threat to invade.

In the election, independence is not expected to be a dominant subject. It will however be notably debated, despite the fact that its advocacy is illegal. More immediate issues are expected to be social and economic problems such as law and order and a worsening crime rate, pollution and the environment, the price and scarcity of housing, and traffic congestion.

Advertisement for 'SURPRISING TAIWAN'. Text: 'Come and discover the world that is Taiwan.' Includes a map of Taiwan and contact information for the Taiwan Trade Centre.

Advertisement for Evergreen International Corp. Text: 'A tradition of service and innovation.' Includes the Evergreen logo and contact details for their worldwide service.

Advertisement for Hotel Royal Taipei. Text: 'European elegance in the heart of Taipei.' Includes a photo of the hotel and contact information.

Advertisement for British Exports to Taiwan. Text: 'BRITISH EXPORTS TO TAIWAN ARE BOOMING'. Includes statistics for 1985, 1987, and 1989, and contact info for the Trade Committee.

**TAIWAN 3**

Alison Maitland on the costs of an extraordinary economic record

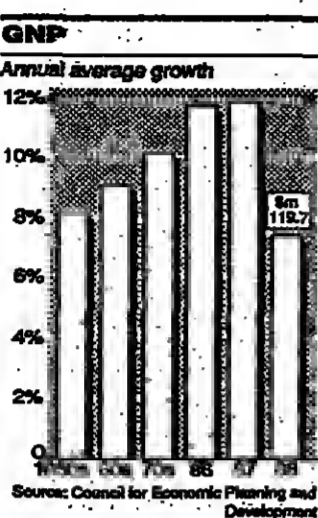
**Unpalatable price of success**

A WHITE "Royal Limousine" Cadillac with gold trimmings does a U-turn in Taipei's fashionable Tunhua North Road and pulls into the curb, depositing a slightly plump young man from one of its six doors. Hardly anyone gives a second glance. A few yards further down, the AsiaWorld Plaza Hotel is offering one night's stay in its Genchui Khan Presidential Suite for a mere \$5,500.

Tales of outstanding wealth are legion in Taiwan after 27 years of economic growth averaging 9 per cent a year. One of the country's richest men is reported to keep piles of US dollars and personal notes in the transparent base of a lavatory - whether for security or show is not entirely clear.

Part of this is going into short-term private investment abroad. Some is also moving into manufacturing plants in south-east Asia as Taiwan's industry adjusts to labour costs that are rising at 20 per cent a year and to a 60 per cent appreciation in the Taiwan dollar over the next four years.

	1985	2000
AGRICULTURE	6.0	3.0
INDUSTRY	49.7	46.5
Mining	0.5	0.3
Manufacturing	40.2	38.9
Construction	4.1	3.7
Public utilities	4.1	3.7
SERVICES	44.3	50.5
Transportation/communications	6.1	11.0
Wholesale and retail trade	13.9	15.4
Banking, insurance etc	3.6	4.5
Public and housing services	16.2	13.5
Other services	4.5	6.1



Source: Council for Economic Planning and Development

accomplishment of 14 major construction projects," says Dr Frederick Chien, chairman of the Council for Economic Planning and Development.

lack of productive investment and growing signs of social dislocation have all emphasised the need to stimulate domestic demand.

state companies and banks. First, however, the Legislative Yuan (parliament) must pass a special statute - because privatisation runs counter to many of Taiwan's existing laws - and that could take time.

The Taiwan dollar has been relatively stable recently, since an 8 per cent surge against the US currency in April at the time of trade talks between Taipei and Washington.

The Government is preoccupied with inflation, and has managed to bring the consumer price index down to about 3.5 per cent from a high this year of 5 per cent. But this gives no impression of wider inflation, including wages and housing costs, which unofficial estimates put at between 8 per cent and 20 per cent.

IN TYPICALLY flexible fashion, Taiwan is managing to keep its exports buoyant while responding both to rising domestic costs and pressure from abroad to liberalise imports.

Change has been forced on Taiwan by US pressure to reduce its huge trade surplus. The Taiwan dollar has surged by about 55 per cent against the US currency since 1985 at a high cost to local exporters.

The result has been a 10.7 per cent rise in Taiwan's exports in the first eight months, against an increase in imports of only 4.8 per cent.

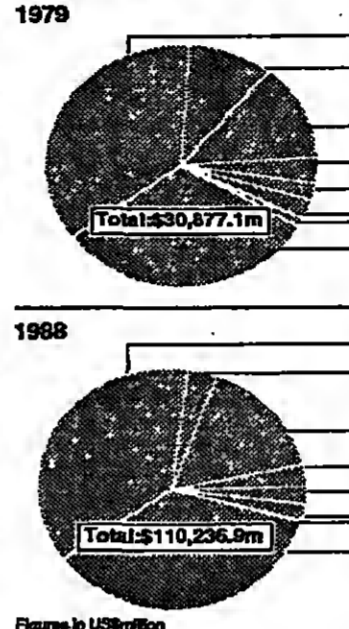
**TRADE**

**Under Washington's eye**

**Taiwan trade 1988**

Exports		Imports	
Electronic products	13,018.2	Electronic products	6,844.4
Textile products	8,572.1	Machinery	4,975.7
Shoes	3,888.5	Chemicals	4,905.9
Electrical M/C & apparatus	3,507.7	Steel	3,301.7
Meats	3,488.7	Transportation equipment	2,821.1
Toys & sports goods	3,322.5	Crude petroleum	2,212.4
Machinery	3,188.0	Metals	1,976.3
Plastic products	2,859.9	Electrical M/C & apparatus	1,842.6
Transportation equipment	2,519.6	Food, beverages & tobacco	1,825.4
Wooden products	2,119.0	Pepper, pump	950.8
Basic metals	928.3	Refined petroleum products	830.9
Optical instruments	734.1	Medical equipment	774.3
Ceramic products	677.0	Raw cotton	478.9

**Trade distribution**



Year	Region	Value
1979	Asia	11,186.7
	Japan	6,610.0
	Middle East	3,158.3
	Europe	4,008.6
	Oceania	983.5
	Africa	804.8
	S. & Central America	815.3
	Others	860.7
	N. America	9,570.2
	(United States)	9,033.0
1988	Asia	40,823.8
	Japan	23,561.7
	Middle East	4,035.5
	Europe	17,889.6
	Oceania	3,165.9
	Africa	2,625.6
	S. & Central America	2,332.5
	Others	420.2
	N. America	36,963.8
	(United States)	36,429.0

Source: Board of Foreign Trade

with the mainland, which is permitted if carried out through a third country, has also flourished this year. Mr Augustine Wu, deputy director general of the Board of Foreign Trade, said two-way trade had risen sharply in the first six months and then slowed after the events in Tiananmen Square in June. But he thinks that "soon it will be normalised" and expects trade to rise to \$3.5bn this year from \$2.5bn in 1988.

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The ROC on Taiwan has consistently sought foreign investment as a partner in its development of the island's social, political, and economic structures. As a result of its close association with the international community, Taiwan has rapidly developed as one of the strongest economic and democratic forces in Asia.

**Strong Domestic Market**

Ford Motor Company established a joint-venture in Taiwan years ago and has become one of the top five largest companies in the domestic market. General Motors will establish itself later this year. The local stock market had a capitalization of US\$231.2 billion at the end of May, 1989.

growth and the substantial changes brought about by the ROC's economic liberalization. The U.S. Citibank is keeping pace with the expanding domestic market by planning the establishment of twenty five branches island-wide within five to ten years.

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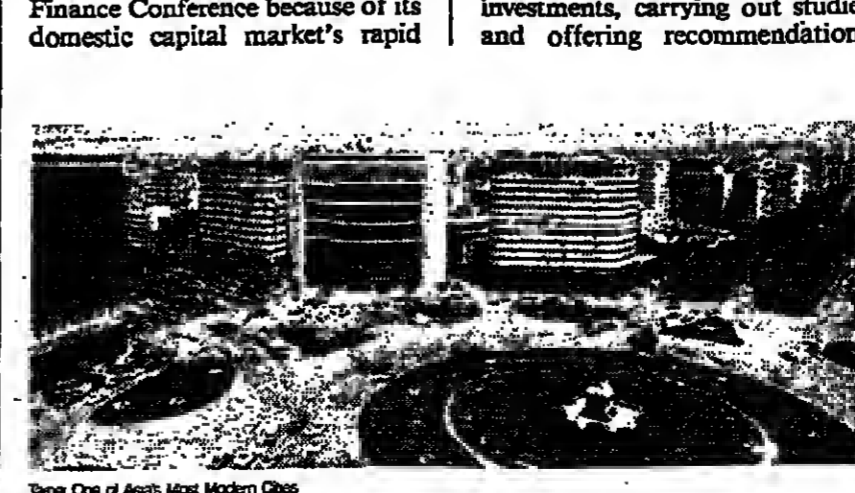
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TAIWAN 5

Alison Maitland examines the expanding high-technology sector

Aided by a 'reverse brain drain'

ONCE derided as a nation of copy cat producers, Taiwan finds that the tables are turning as its high-technology industry advances into adulthood.

Microtek International, a leading Taiwan-based producer of image scanners, has recently taken a small competitor to court. It alleges that Umax, founded by six former employees of Microtek, is making the same product at a nearby plant using techniques learned at Microtek.

Mr T C Chiang, of the Lee and Li law firm who is handling the case for Microtek, says that know-how, techniques absorbed during the course of a product's development - cannot be protected by copyright law. "We want to establish a concept that intellectual property can be protected by civil law, even if it is not patent or copyright," he says.

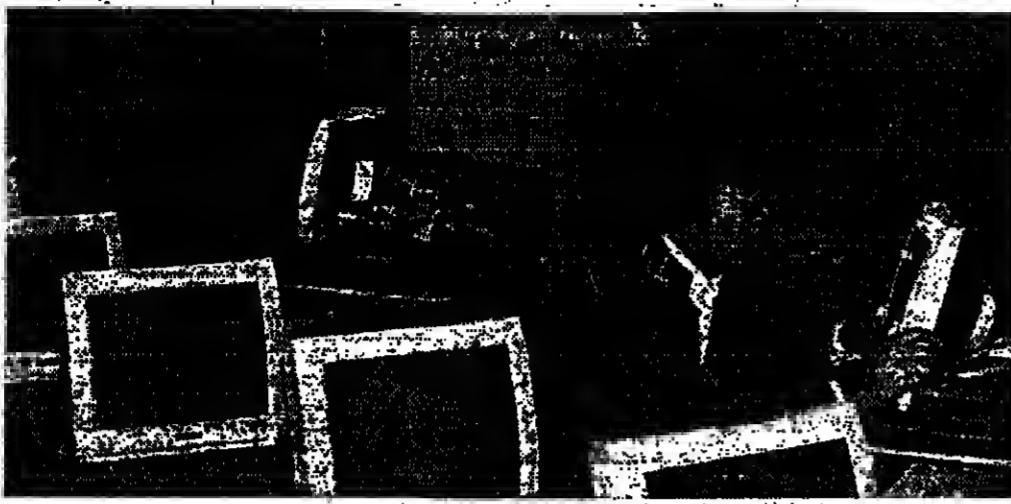
The case is currently pending with a district court and is being closely watched by the Government, since it may set a significant precedent.

Microtek, whose sales ballooned from \$6m in 1984 to \$38.8m in 1988, was one of the first companies to set up in Taiwan's pioneering high-tech science park, Hsinchu, in 1980. The park, about 70 km south-west of Taipei, now has 100 companies with 16,000 employees and is at the heart of the country's drive upwards into sophisticated and high-quality goods.

Steadily rising land and labour costs and an appreciating currency have made Taiwan's former staple of low cost production uncompetitive. "We have to keep moving ahead because our national goal is to become a developed country before 2000," says Dr Irving Ho, president of the government-sponsored Institute for Information Industry, who was the science park's first director general.

The road ahead is steep. Taiwan's hardware output last year totalled \$5.2bn, while the software and service side produced only \$400m. Overcapacity is helping push hardware prices down worldwide, while a severe shortage of experts in the software field is expected by the mid-1990s.

"If we develop ourselves into a leading software and systems manufacturer, it should have a



In the picture: Taiwan produced 10 per cent of the world's personal computers last year

good impact on computer application in the worldwide market, and everybody would benefit," Mr Ho says. Companies in the science park now spend between 5 per cent and 10 per cent of their sales on research and development, compared with an average of 0.5 per cent in the manufacturing sector as a whole. Taiwan's mainly small and medium-sized businesses have

The industry has attracted overseas Chinese from the US and elsewhere

generally spent little on R&D. So the Government established the Industrial Technology Research Institute in 1973 to develop new ideas, or license them from abroad, and transfer the results to the private sector.

As the industry has grown, it has attracted a "reverse brain drain" of overseas Chinese, who have returned from the US and elsewhere. At first, local Taiwanese thought the industry too risky, but a series of successful stock market flotations by computer companies has spread the word that business can be lucrative.

Technology is still coming into Taiwan from abroad, but local companies are also exporting their own technology for the first time. Mitsc International, a Hsinchu-based manufacturer of personal computers, announced last month that it was transferring complete

plant technology for the manufacture of two of its existing PC models to an Indonesian company, Multipolar, which will pay it fees and royalties. The venture will enable Mitsc to spread its brand name, a growing preoccupation since only a handful of Taiwanese companies are familiar abroad, especially in the West. Acer, Taiwan's biggest computer manufacturer, has set up an association with four other groups to promote Taiwanese brand names in an effort to retain a competitive edge over south-east Asian producers. The Government would like to see an increase in brand name

computers to 40 per cent of total output over the next four years, from 20 per cent now. Competition is becoming tougher in other ways, too. Microtek says its revenues are down this year, mainly because Hewlett-Packard of the US entered the market for scanners last year and the price of a colour scanner has plunged from \$2,500 to \$2,200.

The worldwide downturn in the chip market is also hurting Taiwanese producers. Taiwan Semiconductor Manufacturing Company (TSMC), a joint venture between Philips of the Netherlands and the Taiwan Government, was set up in 1987 purely to make computer chips. Dr Klaus Wismer, its president, says that 50 per cent of their local market has disappeared in about three months. TSMC, which currently makes 12,000 chips a month and will have five times that capacity with its new plant

starting early next year, is itself weathering the storm. "We have refilled capacity with added requirements from overseas," says Dr Wismer. He argues that Taiwanese computer makers are particularly vulnerable to the current downturn because they mainly make consumer goods, a market that has softened appreciably. Taiwan produced 10 per cent of the world's personal computers last year.

Acer, meanwhile, has just set up a \$250m joint venture in Taiwan with Texas Instruments of the US to make Dynamic Random Access Memory (D-Ram) chips, a potentially risky decision at a time when the Japanese are dropping plans to increase output because of falling demand. Mr Stan Shi, chairman, went into the venture with his eyes open: "Taiwan needs a D-Ram industry for the long term," he says. "If you need that, you have to carry the risk."

Mr Morris Chang, chairman of the Industrial Technology Research Institute, says Taiwan is building enough capacity to become the world's fourth producer of chips by 1992, behind Japan, the US and South Korea.

A downturn could be a good experience, he argues. "Some companies will be in trouble and some may have to fold. But I think we will see a dynamic growth period for the Taiwanese integrated circuit industry. Given a few years, the industry will adjust to a more healthy balance of capacity versus demand."

John Elliott on why businesses are increasingly investing abroad

Corporate net spreads overseas

TAIWAN'S businessmen have started making their mark around the world during the past two or three years as manufacturers and investors. Their first target has been new sources of cheap manufacturing labour. But increasingly they are wanting to spread their wings and gain marketing and technological expertise which is lacking at home.

"We want to get into the boardrooms of foreign companies to tap international lines of information," says Mr Nelson Chang, president of Chia Hsin Corporation.

The search for cheap labour, to make products such as shoes, toys and textiles, has made Taiwan the first or second largest new investor in the Philippines, Thailand, Malaysia and Indonesia.

At the same time, foreign investment is continuing to flow into Taiwan in record amounts. In the first eight months of this year inward investment totalled \$1.66bn, exceeding the previous full year highest total of \$1.42bn reached in 1987.

Taiwan's investments overseas started because of rising domestic wage costs and because of rapid increases in the value of the Taiwan dollar, which has appreciated by about 50 per cent in the past four years.

Companies have also wanted to expand from their relatively small domestic market of 20m people and to dilute the political and labour risks of operating at home. The outflow of capital was substantially freed two years ago and this has driven companies to look for investments and takeovers in the US and in Europe.

"We must establish footholds abroad now when there is so much surplus foreign exchange and then generate earnings for the day when the Taiwan economy has a downward trend," says Mr Chang. His company has diversified into textiles, property, computer software and financial services in Taiwan and is now working on two cement company acquisitions in the US and an African country.

In the first eight months of this year new investments abroad approved by the Taiwan government reached a record total of \$509m compared with \$153m in the same period last year. Mr Johnny Ni, director of the Ministry of Economic Affairs' Industrial

Investment Centre says that these figures under-state the real total.

He estimates that the total value of new foreign projects backed by Taiwan investors (who often take old or new Taiwan plant with them) was nearer \$1.6bn in the first eight months of this year compared with \$1.4bn in the whole of last year. But Mr Ni casts doubt on mainland China's claim that Taiwan businessmen have implemented \$500m of investments indirectly through Hong Kong.

Mr Ni's figures show that in the first half of this year new Taiwan-backed investment totalled \$410m in Thailand, \$350m in Malaysia, \$130m in the Philippines and \$50m in Indonesia. He estimates the figure in the US at \$1bn in the first eight months.

The official government \$509m total for the first eight months include \$349m in the US and \$70m in Malaysia. The biggest industrial sector involved was chemicals at \$322m, followed by electronics and electrical appliances at \$87m and services at \$34m.

But Taiwan companies do not always find foreign excursions easy, especially on take-

over bids. "It will be some years before Taiwan is really significant abroad because we don't have the necessary managerial depth," says Mr Douglas Hsu, president of Far East Textile, one of Taiwan's largest and internationally most active groups which is planning investments eventually totalling \$200m in Pilsyn, a recently acquired Philippines fibre company.

Taiwan has also found it difficult to negotiate special arrangements with the many countries that do not recognise it diplomatically because of international pressure exerted by Peking. It has managed to agree a double tax treaty only with Singapore, one of several countries with which it has so far failed to reach an investment protection agreement.

Mr Ni shows some impatience with such countries, including the Philippines, where he says Taiwan has overtaken the US as the largest foreign investor but cannot obtain tax and investor agreements. "These countries need jobs for their people and to develop their economies. So they must find a solution or big investments will not materialise for them."

Imperial Chemical Industries

Prize investment

TAIWAN was recently chosen by Imperial Chemical Industries in preference to countries such as South Korea, the Philippines and mainland China for a \$300m fibre project which is the UK-based group's biggest single investment anywhere in a decade.

At a time when Taiwan's wages and land costs are rising sharply, and when there are also increasing labour, trade union, environmental and other problems, that might seem a curious decision on a highly mobile project.

But ICI, which does not recognise unions in its Taiwan plants and has not suffered labour problems with its 600 employees, appears to have no doubts about its decision. There do not even appear to have been doubts following environmental pollution protests which forced it to shut an existing joint venture plastics plant in the south of the island shortly after it announced the new venture.

reduced acidity neutralisation before the dumping.

Before the protests, it had started spending \$50m on equipment which would dispose of the surplus acid and end the dumping at sea. This forms part of a \$100m expansion to double output at Kaohsiung Monomer, which is 40 per cent owned by China Petrochemical Development Corporation, a Taiwan government company.

ICI has been in Taiwan for 41 years. It was involved only in trading until 10 years ago when it started production, including two joint ventures - Kaohsiung Monomer and Atlas Taiwan which make explosives. Its annual turnover is \$300m, 60 per cent imported sales and 40 per cent local manufacture. Mr Chandler expects this to triple by 1992 when the new TPA plant will be operating and the doubling of output at Kaohsiung Monomer should be completed.

ICI could not deny the accusation but has refused to accept a NT\$900m (about \$24m) claim from the fishermen. It is trying to reach a settlement with the government's Environmental Protection Administration and has offered to improve its monitoring of subcontractors' ships and to meet new legal requirements on

Advertisement for 'WORLD TRADE CENTER' featuring a large graphic of the building and text: 'Every day 1,000 importers and exporters see us first'.

Advertisement for Jardine Fleming with the headline 'We have an edge in Taiwan' and text describing their services in the Taiwan stock market.

## TAIWAN 6

Alison Maitland on the country's unenviable pollution record

## Green factor enters centre stage in run-up to election

ONE of the striking sights on the road into Taipei from the airport is the motorway toll booth attendants wearing surgical masks over their mouths and noses.

The reason is that traffic is so heavy on the overloaded motorway that it often grinds to a virtual halt and the air is thick with poisonous exhaust fumes. In Taipei, too, some of the hundreds of thousands of motorcyclists wear masks as they ride about in clouds of smoke.

Pollution has become a top public concern and the opposition Democratic Progressive Party (DPP) is making it a priority in the big cities for elections on December 2.

"The main issue is that Taiwan is one of the most polluted places on earth," says Mr Tsai Shih-Yuan, DPP deputy secretary general. "Since the late 1980s we ignored all the issues about pollution... part of the reason for our successful export business is that we have a lot of polluting industries and they haven't had to pay for the cost of pollution."

With 548.5 people per square kilometre, Taiwan has the second highest population density in the world. Its 30m increasingly affluent citizens drive 10m cars and motorcycles, giving a motor vehicle density double that of Japan and 15 times that of the US. In June alone, more than 34,000 new cars and 153,000 motorbikes came onto the roads.

There are roughly 87,000 factories of every shape and size along the 340 km highway that links the north of the island with the south. Many use toxic substances which have been allowed to leak into the water and soil during years of environmental neglect.

Oysters raised in Taiwan contain rising amounts of heavy metals, while serious levels of cadmium, chromium, zinc, copper and lead have been discovered in arable land near factories and waste dumps.

There is only a minuscule amount of primary sewage treatment and the health risks are exacerbated by Taiwan's 7m pigs, which produce up to six times the excrement of a



Masked rider: Motorcyclists in Taipei are now forced to protect themselves against pollution

human.

"Facilities to protect humans and nature from the toxic, mutagenic, carcinogenic, unsanitary and generally dirty and unpleasant consequences of industry are at best primitive," said a report published earlier this year by the Academia Sinica group of professors and researchers.

The report pointed out that public protests about pollution had become more common and

**"In general the public knows too little to act as responsible participants in the process of maintaining a healthy environment"**

in some cases more aggressive. "The public knows enough to become alarmed, but in general knows too little to act as responsible participants in the process of maintaining a healthy environment."

In October last year there was a potential accident when residents of the southern industrial district of Lin Yuan laid siege to 13 petrochemical

plants which they said were discharging waste water that polluted their fishing grounds. The demonstrators are reported to have tried to close valves and shut off pipes and to have been stopped only by bodily intervention by plant employees.

A spate of environmental protests like this have triggered increasingly large demands for compensation, which companies were at first willing to pay. As the amounts grew, so did accusations that some protesters were not genuine plaintiffs but were jumping on a lucrative bandwagon.

The Government now discourages direct compensation payments. But it has taken the growing unease about pollution on board and admits the problem is huge. Mr Shih-Chien Yang, director general of the Industrial Development Bureau, reckons it will take five years to sort out the country's industrial pollution and says there is a shortage of environmental control experts.

To co-ordinate the clean-up, the Government established an Environmental Protection Administration two years ago. The EPA has a committed young staff of 320 at its Taipei

headquarters, 900 enforcement officers to check on polluting factories, and a long list of practical and educational plans such as the Blue Sky and Clean River projects.

With a budget this year of more than \$500m and plans for the public and private sectors to spend up to \$40bn on the environment by 2000, the EPA's head, Dr Eugene Chien, argues that the Government has made a U-turn in the past two years. "Things were deteriorating before, now we're going upwards," he says.

The EPA is seeking help from foreign companies that specialise in waste management and pollution control. For example, a \$130m project to build three huge rubbish incinerators for the cities of Taipei and Keelung is being planned and supervised by the West German group Pichtner.

Some westerners see Dr Chien as a crusader, locked in battle with entrenched political and business interests. Whether he wins is still an open question. As one western observer put it: "The Government is walking a tightrope, wanting to appear very aggressive and at the same time not to irritate powerful forces."

John Elliott on the trade unions since the lifting of martial law

## A watershed in labour relations

FORD Motor's Taiwan company recently sent its trade union officials to Mazda's plant in Japan to learn co-operative ways of conducting labour relations. Meanwhile, Taiwan's emerging opposition is trying to politicise labour troubles, which could exacerbate conflicts.

This illustrates how Taiwan's infant trade unions and labour relations are at a watershed following the ending of martial law. The question is whether workers will concentrate on boosting their own wealth in a booming economy, or will they change their work ethic and combine in collective militancy.

If you want me to make a choice between western and Japanese style labour relations, then because of our philosophies and our culture, I say that we prefer the Japanese style," says Mr Shou-Po Chao, chairman (with Minister of State rank) of the Council of Labour Affairs.

"Compared with South Korea we have no union prob-

lems. We have none of Korea's huge hostility between labour and management, although the political parties are there at every strike," says Mr Nelson Chang, president of Chia Hsin Cement. "At present employees' bargaining strength stems from shortage of labour rather than militancy."

There is a serious scarcity of

**The question is whether workers will concentrate on boosting their own wealth or combine in collective militancy**

labour, especially on construction sites. But the Government is resisting demands for widespread import of workers because of the risk of social tension. There are already an estimated 20,000 illegal workers from elsewhere in Asia. Mr Chao's council has prepared guidelines for selective importation of people to work on spe-

cific construction projects, staying for not more than one or two years.

No-one is sure which way the country's labour relations will now develop. Optimistic employers argue that after a rash of strikes which followed the lifting of martial law two years ago, employers and employees have settled down to more constructive relationships. This argument suggests that the traditional work ethic will curb militancy.

Others argue that the work ethic has already started to deteriorate and that there will be an inevitable build-up of trade union power, despite Taiwan's tradition of small companies and Confucian respect for authority and relationships.

Out of 8m people in employment, only 2.4m are in trade unions, which have been seen basically as constructive bridges between employers and employees, dominated by KMT-appointed leaders. The unions are mostly in-house, plus some external craft-based organisations. Many are linked to industrial and geographical union federations which have no real power. Only a fraction of the unionised total are so far covered by collective bargaining agreements, while the Council of Labour is now encouraging employers to introduce them.

For many years employers have only been required by law to take account of their employees' welfare. This has centred on profit sharing - mainly paid in February or March as a Chinese New Year bonus. When strikes were permitted with the lifting of martial law, these bonuses became the focal point for industrial action.

Ford's factory - a 70 per cent Ford-owned manufacturing and importing joint venture called Ford Lio Ho - paid three months' bonus this year after a three-month strike called in support of a claim for 10 months' bonus. The three months amounts to 5 per cent of profits and this has now been included in the company's first collective agreement as a fixed percentage for the future. Ford also pays a two-month year-end bonus and a 24-day attendance bonus which brings the pay of the company's 2,500 hourly paid workers up to the equivalent of about

18 months salary a year at an average rate of T\$19,000 a month.

Such high bonuses are not unusual. Far East Textile, a major Taiwan group which has faced union troubles and has been averaging between 15 per cent and 20 per cent wage increases for several years, paid 190 days bonus in one

**The new labour laws will provide a framework of legislation which Taiwan needs as its economy develops**

plant last year after a one-day strike. This year it paid 165 days and Mr Douglas Hsu, the president, says the group average is 130-140 days.

The other main source of trouble has been disputes over employees' rights and employment conditions, especially on issues like severance pay. In many cases the disputes have been caused by conflicting interpretations of the Labour Standards Law which lays down minimum conditions and covers seven industries such as manufacturing, construction, agriculture and transport with about 3.5m workers.

Labour activists want the range of industries expanded. But employers say the law is already unfairly tilted against them and, backed by the Ministry of Economic Affairs, they are opposing any expansion. Revisions have been prepared by the Council of Labour. These are partly aimed at clarifying points which have caused disputes and at introducing flexibility.

A revision of the Labour Union Law, which governs disputes and was last changed in 1975, is also being prepared. This will introduce the US concepts of unfair labour practices and private mediation and arbitration, plus restrictions on strikes affecting the public. It will cancel compulsory union membership where unions exist, and will give general guidance on the conduct of strikes.

These laws could be highly contentious, but they will provide a framework of labour legislation which the country urgently needs as its economy develops.

Profile: Dr Fredrick Chien

## Plea for mutual tolerance

"THE Government can no longer play the old role of a great power, telling you: 'this you can do and that you cannot do and if you do this I am going to crack down,'" says Dr Fredrick Chien, a distinguished 54-year-old diplomat who is now chairman of the Council of Economic Planning and Development.

"I think the most worrisome thing is that we have had political democratisation, economic liberalisation and the social opening up, all coming to a confluence in a very brief period of two years. Therefore people are really enjoying this new found freedom and everybody would like to practice it to the maximum. That is what worries me. But I hope this will be temporary," he said.

Mr Chien was reflecting on problems created by Taiwan's recent massive changes which have led to rampant gambling, especially on the stock exchange.

The country's work ethic has been put at risk and the hitherto almost unquestioned authority of the Government has been questioned and even successfully challenged.

Sometimes tipped as a possible future prime minister, Mr Chien was Taiwan's *de facto* ambassador in the US for five years from 1983. He was born into a distinguished Shanghai family and is one of a younger generation of mainlanders who have achieved influential government posts in the past couple of years.

**"The Government should learn that it is not omnipotent. It cannot interfere too much. The people will not tolerate it"**

"The Government cannot exert its old role. It cannot interfere too much. The people will not tolerate it," he said, referring to at least two occasions when the Government has been forced by public protest to back down on policy decisions.

One happened a year ago when Ms Shirley Euo, Finance Minister, imposed a tax on stock exchange dealings to try to dampen the market and was forced by speculators' protests to water down her plans.

"The Government simply should learn that it is not omnipotent, and the people should learn that too. If you want to have a democratic society you cannot have double standards."

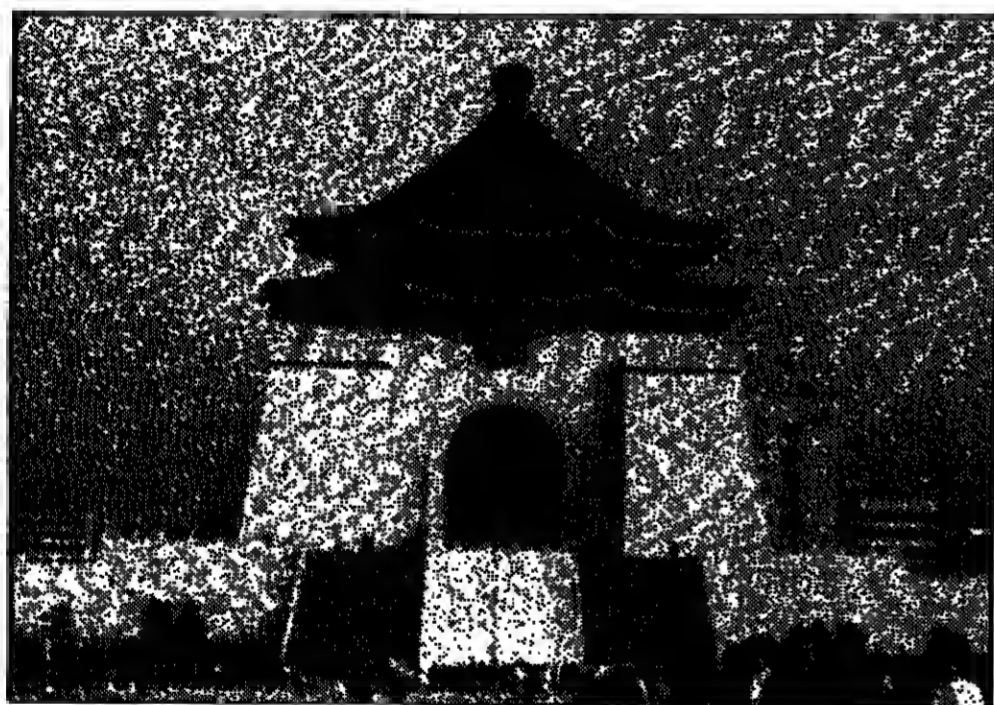
Reflecting concern about possible student unrest, Mr Chien said that the Government would urge educational institutions "to help the students exercise more self-control, to live and let live." That kind of ethical approach should be popularised. "In other words try to discourage people from being overly eccentric. The Government should also provide better law and order enforcement to counter a rising crime rate."

Mr Chien said that Taiwan's labour problems were "not indigenous." Many "outsiders" from the US, Ireland and elsewhere had "come to lecture us." The international trade union movement had been very active.

"We have the traditional Chinese working ethic that employers treat employees as members of the family and it is reciprocated." Now a trade union movement was being imported, just as had happened in Japan. It would "take some time to achieve mutual respect and mutual tolerance."



Dr Fredrick Chien



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An ebullient US stock market, propelled by encouraging economic news...

Brazil's strange beast

A state-owned company run by military officers and operating in a competitive, high-technology sector...

Market Statistics table with columns for Base lending rates, Benchmark Govt bonds, European options each, etc.

Companies in this section table listing various companies like Aberfoyle Holdings, Accor, Akzo, etc.

Chief price changes yesterday table with columns for Frankfurt (DM), Paris (FFP), London (Pence), etc.

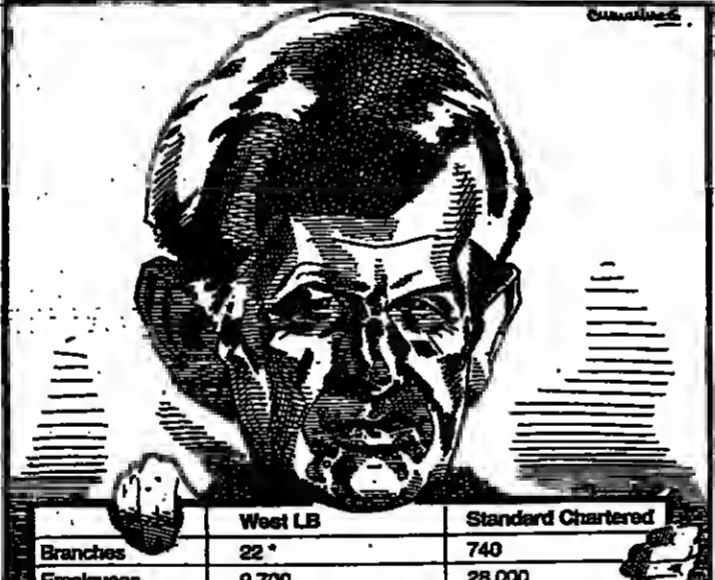
Eurotunnel confident amid cost problems

By Andrew Taylor in London and George Graham in Paris. EURO TUNNEL, the Anglo-French channel tunnel group, yesterday mounted a robust defence of its handling of the crisis...

Standard-bearing WestLB grabs the political initiative

Haig Simonian explains how the group has sought to take the lead in the restructuring of West Germany's public-sector banking system

By teaming up with Britain's Standard Chartered Bank, WestLB can envisage such a private-sector institution...



WestLB is also buying Standard Chartered's European branch network, employing some 550 staff in 10 countries...



I see no ships: Alastair Morton presenting Eurotunnel's interim figures in London yesterday.

ICI in \$450m sale to Merck venture

By Peter Marsh in London

IMPERIAL Chemical Industries is to sell its US non-prescription drug business to a joint venture between Merck and Johnson & Johnson...

Shares in Singapore investment fund to be placed today

By Nikki Tait in London

SHARES in a new \$30m investment company, the Singapore SEDDAQ Fund, specialising in investments in Singapore's second-tier market are due to be placed today...

Newport advertisement with headline 'We can relocate you before the rest can send a brochure.' and 'NEWPORT A TOWN TRANSFORMED' logo.



INTERNATIONAL COMPANIES AND FINANCE

# American Medical accepts reduced offer from IMA

By Anatole Kaletsky in New York

AMERICAN Medical International, the third-largest US hospital management group, agreed yesterday to a reduced buy-out price of \$66.50 a share from IMA Acquisition.

The troubled Los Angeles-based hospital company's decision followed last Friday's announcement that IMA had failed to find financing for its earlier offer of \$28 a share. IMA is a leveraged buy-out partnership backed by the wealthy Pritzker family of Chicago.

Its financing was being organised by First Boston, but fell through, partly as a result of the collapse of the junk bond market last month. As in several recent cases where junk bond financing has proved difficult to arrange, commercial banks have stepped in to provide a larger proportion of the buy-out debt than originally expected.

Under the terms of the amended agreement, IMA will pay \$28.50 in cash for up to 63m shares of American Medical, equivalent to 86 per cent of the hospital company's stock.

It will then exchange the remaining shares into 20 per cent of the common stock of a newly-formed company, IMA Holdings. Under the earlier offer, IMA was to pay \$28 in cash for 94 per cent of American Medical and convert the

remaining shares into a 10 per cent stake in the new holding company.

By lowering the cash payment and adding to the equity component that will be provided by American Medical's current shareholders, the acquisition group clearly hopes to improve its chances of finding adequate financing.

Banks led by Chemical Bank have committed themselves to providing \$1.078bn of senior debt and Chemical has said it is "highly confident" of syndicating a further \$609m. The bank loans would, therefore, cover 95 per cent of the \$1.687bn in cash required to buy out American Medical's present shareholders.

Previously the banks planned to provide 89 per cent of the buy-out cash. To refinance existing debts and pay the fees connected with the transaction, First Boston would now provide a further \$578m of subordinated debt, instead of the \$712m originally intended. Yesterday's merger agreement said that the Wall Street investment bank had now committed itself to these subordinated loans.

Nevertheless, the deal remained contingent on full financing being completed, a condition that seemed to refer to the bank syndication being arranged by Chemical.

# Embraer prepares to pull out of profits tailspin

Confidence remains high at Brazil's state-owned aircraft maker despite setbacks, writes John Barham

Embraer is one of the stranger beasts in the Brazilian corporate menagerie. It is a state-owned company run by military officers, operating in a competitive, high-technology sector. Against the odds, the group has escaped the overstaffing and feather-bedding rife at other Brazilian state companies to grow into a successful challenger in the civil and military aviation business.

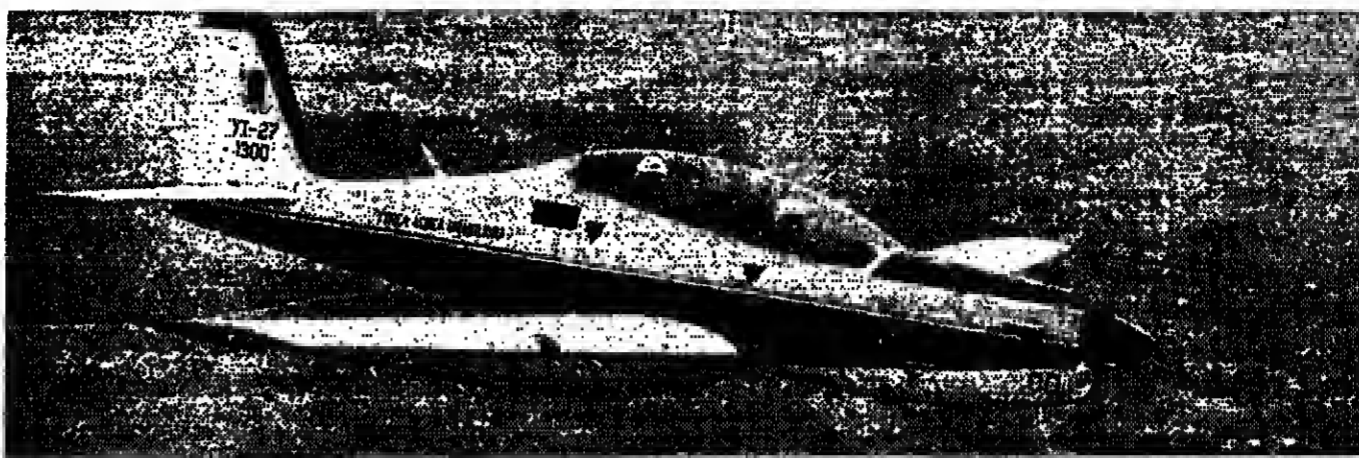
Its successes in the military sector include sales of its Tucano trainer to Britain, while its AMX subsonic fighter is going into service with the Italian and Brazilian air forces.

The company also claims leadership of the world commuter aircraft market.

For most of its 20-year life the company has seen annual increases in sales and profits. But now profits have stopped growing. The Air Force colonels in command at Embraer had spent too long building low-cost planes and too little time at financial engineering.

Mired in debt and shut out of the US, its main market, by threatened trade sanctions, the company reported a \$20m loss in 1988. This year, however, it hopes to rid itself of losses and even make a small profit.

Embraer sees its market growing well into the next century, but its fundamental problem is that its largest share-



Sales of military aircraft, including the Tucano trainer (above), account for 40 per cent of revenues at Embraer

holder, the Brazilian Government, is almost insolvent.

The Air Ministry, which controls the company, preferred to leave it starved of capital rather than sell to the private sector. The group, in turn, acted only after its financial difficulties became clearly insoluble.

It has been unable to raise foreign loans - the only source of long-term finance - because of the debt crisis.

Miraculously, Embraer managed to cover half the \$300m cost of its latest aircraft - the sleek 30-seat Brasilia - with expensive short-term loans. But by last December its short-term debt had risen to

\$350m, equivalent to two-thirds of annual sales.

Now, with help from First Boston, the US investment bank, it is putting together a \$410m loan and equity package to reorganise finances. Mr Adalberto Ferreira da Silva, Embraer's finance director, explained there was plenty of room to sell shares to the public without endangering the government's control of the company.

Brasilia holds 83 per cent of Embraer. Under Brazilian law a company can issue two non-voting shares for every voting share. That means a single shareholder - in this case, the Government - can control a

company with only 17 per cent of equity. As it is, the government holds 97 per cent of voting stock. Non-voting stock in state companies dominates local equity markets, but the public has little control over the companies' affairs.

Embraer has started offering non-voting stock with a local issue of convertible debentures, which should raise \$86m. It also plans to raise \$100m through a debt-for-equity swap.

International banks will swap their Brazilian loans at a discount for shares in Embraer, which will collect the debt's full face value in local currency from the original debtor.

The money will be used to reduce short-term debt and provide funding for the CBA-123 aircraft Embraer is developing jointly with FAMA of Argentina.

The company and First Boston are working on another scheme to raise \$225m for its next aircraft, a 45-seat jet passenger aircraft. They want to set up a participation fund in the US, which would sell shares to investors.

Mr da Silva said Embraer would sign a contract with the fund, granting members a commission on every aircraft sold outside Brazil. American fund members would also be entitled to US tax breaks.

Mr da Silva said Embraer's future was assured, in spite of its financial difficulties. The group claims to have won 40 per cent of the US commuter aircraft market, where its aircraft have gained a reputation for reliability and low cost.

Within three years both of the aircraft under development will be entering full production and boosting cashflow.

Embraer has a three-year backlog of orders for the Brasilia and 200 letters of intent signed for the 45-seater jet aircraft, which is still on the drawing boards.

The AMX fighter, developed jointly with Aeritalia and Aeritalia of Italy, is entering full production. Together with the Tucano, military sales account for 40 per cent of revenues, which reduces dependence on the civilian market.

Embraer expects to achieve financial stability by 1993. Sales by then should be approaching \$1bn a year, compared with a forecast of \$700m this year.

By then the company's earnings should be up to 10 per cent of sales, rather than the meagre 2.7 per cent achieved in 1986 and 1987, the last two years for which Embraer showed a profit.

"Who knows, by 1993 Embraer could even be listed on world stock exchanges," Mr da Silva mused.

# Hewlett-Packard aims to extend industry horizons

By Louise Kehoe in San Francisco

HEWLETT-PACKARD aims to leapfrog competitors in the personal computer market with the launch today of the highest-performance personal computer to date, carrying personal computer power well into the realms of mini-computers.

Beating IBM, Compaq and others, Hewlett-Packard will unveil the first personal computer from a leading manufacturer to be powered by Intel's latest 486 microprocessor.

The new Vectra 486 will be 33 per cent faster than HP's current Vectra 386, the company said.

The new HP personal computer is also the first to use the Extended Industry Standard Architecture (EISA), developed collaboratively by nine of IBM's closest competitors in the personal computer market as an alternative to the IBM Micro Channel.

EISA is a standard for inter-


nal communications between the various parts of a micro-computer. It enables faster data throughput for high-performance applications such as computer-aided design, or graphics simulations.

The cost of the new HP personal computer ranges from \$14,000 to \$20,000, establishing a new high for such products.

The performance and price of the new personal computer overlap significantly with those of computer workstations, blurring an already vague distinction between the general-purpose personal computer and workstations which have been aimed primarily at scientific, engineering and financial analysis applications.

In a move towards linking its personal computer and workstation product lines, HP said it would use EISA in future workstation products.


# THE NAME BEHIND THE NAMES



**INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT**

Placing of a further issue of £35m 11½% Loan Stock 2003 and related currency swaps.

April 1989



**apricot**

Adviser in successful £8.0m offer for DDT Group.

April 1989

**Drayton Asia Trust plc**


Underwriter of £100.5m share issue for Drayton Asia Trust, the largest new trust ever launched.

September 1989

**BELL RESOURCES LTD**

Placing of 72.3 million shares in BHP Gold Mines by Barclays de Zoete Wedd Australia Ltd.


April 1989



**ICELAND FROZEN FOODS HOLDINGS plc**

Arranger and dealer on £100m Sterling Commercial Paper Programme.

September 1989




**Cable and Wireless**

Public Limited Company

Arranger and dealer on US\$ 400m Euro-Commercial Paper Programme.

September 1989

Issued by Barclays de Zoete Wedd Limited, a Member of The Securities Association.



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**DM 100,000,000,—**

Floating Rate Notes Schuldverschreibungen — Serie 185 — 1985/1995

For the three months 10th Oct. 1989 to 9th Jan. 1990 the notes will carry an interest rate of 7.25% (Fixed) plus 10% per annum with a coupon amount of DM 99,38 per DM 5,000,— note. The relevant interest payment date will be 10th Jan. 1990.

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Interest Rate	15½% per annum
Interest Period	6th October 1989 8th January 1990
Interest Amount per £10,000 Note due 8th January 1990	£389.52

Credit Suisse First Boston Limited Agent Bank

**BANK OF NEW ZEALAND**

Cayman Islands Branch

**NZ \$425,000,000**

Floating Rate Notes 1992

For the three months 8th October, 1989 to 8th January, 1990 the Notes will carry an interest rate of 13.31727 per cent per annum.

Interest payable on the relevant interest payment date, 8th January, 1990 will amount to NZ \$166,009.80 per NZ \$5,000,000 Note.

Agent Bank Morgan Guaranty Trust Company of New York, London



INTERNATIONAL CAPITAL MARKETS

Qatar oil group ready to sign delayed Euroloan

By Hunter Reynolds in Dubai

QATAR GENERAL Petroleum Company (QGPC) plans to sign its long-delayed \$400m syndicated Euroloan by the end of this month, according to the National Bank of Qatar. "The final tranches are being put to the documentation and it will be signed shortly," commented a senior bank official. The three-year term loan, with a margin of 22.5 basis points over Libor, was agreed with the 29 banks in the syndicate last January and guaranteed by the Government of Qatar. The cash is destined for the first phase of the North Doha gas field project, now under development. It is Qatar's first foray into the international capital market. The delay was caused by a serious row which broke out when Qatari lawyers turned down the standard loan agree-

ment and demanded changes in the loan documentation. Gulf Investment Corporation (GIC) and Arab Petroleum Investments Corporation (APIC) were nominated as guarantors when the Qatari refused to sign certain technical clauses, relating to jurisdiction and a negative pledge. After three months of talks, the Qataris now appear willing to sign. Local bankers say the row reflects Qatar's inexperience in international capital markets. "Those directly involved included local lawyers, the Central Bank, the Ministry of Finance and QGPC, all very desperate to cover themselves in case something went wrong," commented one banker. "This has not been helped by an over-inflated view of their credit rating."

The bankers have expressed anger at the delays. "It has taken the gift off the deal," commented one banker closely involved in the loan, which should have been signed in February. "This has dented Qatari financial standing." Bankers suggest that Qatar could face problems should it go to the market again. This is serious in view of the recently announced plans to build a \$1.25bn aluminium smelter at Umm Said. "Banks will want to make sure that the rules of the game are clear before they start bidding," said a banker. Meanwhile, Chase Investment Bank, which in June was mandated to raise \$200m by Qatar, is believed to have had similar problems over documentation. It is not clear when the five-year loan will be signed.

F&CM to launch Mexico fund

By Hilary de Boer

FOREIGN & Colonial Management, the London-based fund management group, is making its second foray into Latin America with the launch of a \$50m Mexico fund. The group, through its joint venture Latin American Securities, is launching the Mexico Investment Company as the fund's manager. It already runs the Brazil Investment Company, established in 1987. The open-ended Mexico fund will be registered offshore in Luxembourg and will be only the second country fund to invest in Mexico. The closed-ended Mexico Fund, which has been operat-

ing since 1981, is listed on the New York Stock Exchange with a total capital of \$147m. Latin American Securities aims to take advantage of liberalisation moves at the world's best performing stock market, which has risen 122 per cent this year in local currency terms and 58 per cent in dollar terms, according to the FT-Actuaries World Index. In August, the Mexican authorities announced overseas investors would be allowed to invest in any of the 265 listed Mexican stocks, with trust arrangements in place to prevent foreigners gaining control of Mexican companies.

Mr Audley Twiston Davies, director at FCM, said his group had been investing in Mexican stocks before the liberalisation moves, but ownership restrictions meant there was little stock available to foreigners. The current economic picture helped Mexico an attractive investment, he said. Inflation fell to 16.3 per cent in August - having been as high as 179 per cent in February last year - and was forecast to drop to 12 per cent next year. The Brady debt plan was helping to repatriate capital, while privatisation was proving a healthy source of new stock for the market.

FT INTERNATIONAL BOND SERVICE

Listed are the latest international bonds for which there is an adequate secondary market.

Table with columns for Country, Issue, Maturity, Coupon, and Yield. Includes sections for US Dollar, Yen, and other international bonds.

FT GUIDE TO WORLD CURRENCIES

The table below gives the latest available rates of exchange (rounded) against four key currencies on Monday 9 October 1989. In some cases the rate is nominal. Market rates are the average of buying and selling rates except where they are shown to be otherwise. In some cases market rates have been calculated from those of foreign currencies to which they are tied.

Table with columns for Country, Currency, and Exchange Rate. Lists various countries and their currencies relative to the US Dollar, German Mark, Yen, and British Pound.

Special Drawing Rights October 9, 1989 United Kingdom £1.26733 United States \$1.26436 Germany West D.M. 2.40545 Japan Yen 180.203 European Currency Unit Rates October 9, 1989

TRADE INDEMNITY THE CREDIT RISK MANAGERS

Advertisement for Trade Indemnity, featuring a logo and text about credit risk management and insurance services.

Advertisement for Venture Capital, offering financial times proposals to publish surveys on 30th November 1989.

Advertisement for Canada, offering financial times proposals to publish surveys on 7th November 1989.

Advertisement for Stephen Dmbar-Johnson, offering financial times proposals to publish surveys on 21st October 1989.

Advertisement for Banco Bilbao Vizcaya, providing information on second quarterly dividend 1989.

Advertisement for General Motors Corporation, detailing the dividend declaration of 12th September 1989.

Advertisement for Business Services, offering management/marketing services.

Advertisement for Computer Hire, offering services from £26 per week.

Advertisement for Rental Systems Ltd, offering computer rental services.

Advertisement for Aircraft for Sale, featuring a 'WANTED' notice for HS 125-600 or HS 125-400.

Advertisement for Seymour Paul & Co., offering hotels and licensed premises for sale.

Advertisement for Invoice Factoring, offering private business financing services.

Advertisement for Business Services, offering various support services for businesses.

INTERNATIONAL CAPITAL MARKETS

US holiday and future Italian issue hit trade

By Andrew Freeman

EUROBOND markets lacked direction yesterday, with the US holiday and extensive preparations for Italy's forthcoming jumbo issue occupying syndicate officials.

INTERNATIONAL BONDS

Last week's relaxation of duration restrictions on Euro-French franc deals when it issued a FF200m deal for Volvo Group Finance.

The one-year, dual-currency issue offered investors a 13 per cent coupon and carried a borrower's option to redeem the proceeds in either francs or US dollars.

An official said the distribution of the paper was treated on a private placement basis and that the bid price was around less than 1%.

time such a mandate has been won by a savings bank. There was good demand for the bonds from European investors chasing the attractive yield.

The Republic of Austria's three-year floating-rate deal brought on Friday by Österreichische Länderbank, with a Schöb.5bn international tranche co-ordinated by Credit Suisse First Boston, was trading steadily.

The bonds immediately met good demand from investors after the launch on Friday when the deal was increased from 3.5bn to 5.5bn.

The bonds immediately met good demand from investors after the launch on Friday when the deal was increased from 3.5bn to 5.5bn.

NEW INTERNATIONAL BOND ISSUES

Table with columns: Borrower, Amount, Coupon, Price, Maturity, Fees, Book runner. Rows include FRENCH FINANCE, WESTLB FINANCE, PERSETAS, ESCM, and others.

In Switzerland yesterday, while there were no new issues, traders reported a consolidation of recently improved sentiment.

The SF200m seven-year deal for CNF launched by UBS last week was trading comfortably around less than 1%.

was trading 1/2 point above Friday's close in the secondary market at 146 1/2 bid.

In Germany, prices gained up to 1/2 point in most recent new issues, helped by follow-through from the US market's performance on Friday.

the Japanese Ministry of Finance noted that the underlying share price had increased by more than 44 per cent in the last three months.

The company was also planning a SF200m convertible issue.

Shearson to contract operations in Australia

By Our Financial Staff

SHEARSON LEHMAN Hutton Australia is to drop out of the Australian interbank foreign exchange market.

Although the Australian unit started up in 1987, Mr Ken Allen, the managing director, said intense competition and shrinking profit margins in the two areas had led to a rethinking of strategy.

The interbank foreign exchange market and Australian-sourced broking areas are "suffering from continuing increased competition and shrinking profit margins."

Reverberations from 1987 crash continue to hit Australian SE

By Chris Sherwell in Sydney

CONTINUING reverberations from the October 1987 crash have further set back in Australia's stock market in the year to June.

The figures take no account of the rally over the past three months, but reflect the gloom which hung over the market for much of fiscal year 1988-89.

Average daily turnovers, measured both by volume and value, slipped below levels seen two years earlier.

Overall market capitalisation stood at A\$220bn for main board equities, down from A\$212bn the previous year.

This is marginally higher than the June 1987 level of 1,764, but still well short of its September 1987 record of 2,905.

A breakdown of movements in particular indices showed that insurance stocks fall further over the year to June.

Gilts fall as sterling moves below crucial DM3 level

By Rachel Johnson in London and Janet Bush in New York

UK GOVERNMENT bonds followed the downward flight of sterling on the foreign exchanges yesterday, finishing a point lower after a day of trading dominated by the weakness of the currency.

of the pound on the foreign exchanges. The benchmark Treasury bond due 2008/07 closed almost a point lower to yield 10.16 per cent.

GOVERNMENT BONDS

lower and there was a degree of stability at DM2.97. At these lower levels, the market had a slight rally to the relief of the market makers who had bought stock at Friday's higher prices.

THE YIELD on the Treasury's benchmark long bond fell below 8 per cent yesterday, reflecting belief that the US Federal Reserve had resumed monetary easing.

Trading was very subdued in New York as most banks were closed for the Columbus Day and Yom Kippur holidays.

BENCHMARK GOVERNMENT BONDS

Table with columns: Coupon, Bid, Price, Change, Yield, Week, Month. Rows include UK Gilts, US Treasury, Japan, Germany, France, Canada, and others.

London closing. New York market closed; latest available prices. Yield: Local market standard. Prices: US, UK in \$bds, others in decimal.

move last week which will perhaps take the Fed funds rate target to 8% per cent from 9% per cent.

Malaysia raises minimum required capital for banks

By Our Financial Staff

MALAYSIA HAS announced revised minimum capital funds for all local and foreign financial institutions, raising them by 4m ringgit to 10m.

been told to raise their minimum capital funds.

This he stated at a news conference to announce the enforcement from October 1 of the Banking and Financial Institution Act.

Mr Jaffer said Malaysia encouraged large foreign banks to give up their equity control and small ones to merge with Malaysian banks.

He said foreign banks which reduced their holdings to less than 50 per cent would enjoy all the privileges of local banks, such as being allowed to open more branches.

LONDON MARKET STATISTICS

Table showing market statistics for various categories like British Funds, Financials, and others.

LONDON RECENT ISSUES

Table with columns: Issue, Amount, Date, Price, Yield, etc.

FIXED INTEREST STOCKS

Table with columns: Name, Amount, Date, Price, Yield, etc.

LONDON TRADED OPTIONS

Large table showing traded options with columns for Call/Put, Strike, Date, Price, etc.

FT-ACTUARIES SHARE INDICES

Table with columns: Group, Index, Monday Oct 9 1989, Fri Oct 6, etc.

FIXED INTEREST

Table with columns: Price, Index, Day's change, etc.

Statistics including 10 am 2254.5, 11 am 2251.9, 12 pm 2254.1, 2 pm 2254.9, 3 pm 2251.1, 3.30 pm 2248.9, 4 pm 2244.6.



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UK COMPANY NEWS

# Crescent boss poised to become first black African to run a quoted UK company

## Crescent Africa plans UG stake to inject £1.53m

By Andrew Gidger

MR KOJO Nyantekyi, a Ghanaian former dentist, is poised to become chairman of United Guarantees, the fuel distribution, heating engineering and energy group, which last year lost £3m.

Mr Nyantekyi, 41, plans to take a large stake in UG through his private family-controlled company, Crescent Africa, which trades between Africa, Europe and the US. If he succeeds, it is thought he will be the first black African businessman to run a quoted British company.

The move has been proposed to provide UG with extra working capital of £1.53m, before expenses. Crescent is to subscribe for 20m new ordinary shares at 5p and existing shareholders will be given the opportunity to subscribe for a further 10.5m of the new



Kojo Nyantekyi (left), Crescent chief executive, and Peter Stringer, UG group managing director

shares, on the basis of two new shares for every nine held. UG shares yesterday closed at 8.5p, down 2p.

If all existing UG shareholders subscribe for new shares, Crescent's stake in the company will be 25.7 per cent. However, Crescent is underwriting the offer and if it is required to take the maximum number of shares to which it could become entitled, its holding would amount to 39.3 of the enlarged share capital.

Subject to shareholders' approval, Mr Nyantekyi will become chairman of UG and Mr Peter Delf, a director of Crescent, will be finance director. Mr Peter Stringer, who joined UG in April, will remain as group managing director.

Mr Nyantekyi said he would examine all UG's activities carefully, but he was particularly interested in its UK fuel distribution business and its chemicals side, which distributes Du Pont specialist additives for refinery chemicals.

The deal is conditional on the successful disposal of UG's small tools division to UK Tools, which was agreed on September 29, and on the Takeover Panel waiving any requirement for Crescent to

## Aberfoyle rises 66% to £1.54m

A SUBSTANTIAL improvement in its industrial activities and increased profits on the disposal of investments contributed to higher interim profits for Aberfoyle Holdings.

On turnover up from £3.82m to £4.56m pre-tax profits improved nearly 66 per cent to £1.54m (£929,000).

Mr Ian Coates, chairman, said that the results reflected the achievements of the new management team and the improvement would continue in the second half.

The performance of each of the industrial divisions had improved although the agricul-

tural divisions continued to incur losses. However, changes in the management of Kintyre Estates had brought slow but steady progress. Income from investments was lower, associated with the continuing disposal of the investment portfolio, but results from the property sector had improved, he said.

In 1988 Aberfoyle set up the Mwend Development Corporation (MDC), to develop a 12,000-hectare oil palm plantation in the lowveld of Zimbabwe. The Manyuchi Dam, which will provide the irrigation water for the project, was completed in December 1988.

In July this year Aberfoyle made a rights issue to raise £1.07m for investment in the project and to help the company to meet certain sterling commitments arising out of MDC. More active interest on the part of prospective investors was now being generated, Mr Coates said.

After tax of £332,000 (£322,000) and minorities of £387,000 (£315,000), earnings per share were 6.73p (4.64p) or 6.46p (4.47p) fully diluted. The interim dividend is being raised from 1.25p to 1.5p.

## Mrs Fields achieves a sharp reduction in losses

MRS FIELDS, the USM-quoted cookie and other speciality foods producer and retailer, reported sharply reduced losses in the six months to June 30 from \$15.06m to \$1.31m (£828,000). Last year there was an exceptional \$15.4m to cover store closures.

The board said the traditional stronger second half had started well and it was anticipated that cash flow for the full year would exceed the company's capital expenditure requirements and may allow some additional repayment of long term debt.

They said that as an indication of the continuing trading improvement, if current trends were maintained it was the intention of the board to resume dividends with a payment next June.

Turnover in the period, excluding that of an affiliate, was \$60.19m (\$52.82m); interest was higher at \$4.22m (\$3.6m) and the net loss per share emerged at \$0.01 (\$0.10).

## New product behind S&U's 38% rise

THE INTRODUCTION of a new credit facility helped S&U Stores increase interim pre-tax profits by 38 per cent. Mr Derek Coombs, chairman, said that its Premier Loan had been well received and was proving attractive.

In the six months to the end

of July this Birmingham-based consumer credit, television rental and hosiery manufacturing company reported profits of £1.07m, against £775,000. Turnover rose from £18.15m to £20.48m, an increase of 13 per cent.

Mr Coombs added that the company was continuing to expand its range of services by researching into new markets.

After tax of £375,000 (£272,000) earnings per share were 6.73p (4.64p) or 6.46p (4.47p) fully diluted. The interim dividend is being raised from 1.25p to 1.5p.

## FKB to pay maximum \$22.5m for US medical consultancy

By Nikki Taft

FKB GROUP, the acquisitive sales promotion and marketing company, is buying a New York-based medical and healthcare marketing consultancy, called Audio Visual Medical Marketing, for a maximum of \$22.5m (\$14.23m).

AVMM, together with its two associate companies - Pharmaceutical Services International and Data Med Communications - specialise in providing marketing support for pharmaceutical products and for new product launches. Clients range from Glaxo to the likes of Ciba Geigy, with the three largest customers - Glaxo, Warner Lambert and Parke Davis - accounting for about 45 per cent of the business.

The company, which was formed in 1978, made a pre-tax profit of \$946,000 in 1988 (after adjusting for directors' remuneration), with annual sales running at around \$10m. The vendors have warranted that net assets at completion will be at least \$1.15m.

The initial consideration is \$3.5m, of which \$500,000 is being satisfied in FKB shares, which the vendors have agreed to retain for at least 18 months. The remainder comes in loan notes, which are realisable in January 1990.

Additional stage payments may also be made, dependent on average post-tax profits in each of the four years to end-December 1992. The maximum additional consideration would be \$18.5m. At the option of FKB, one-fifth of this sum could be satisfied in the FKB shares - again to be retained by the vendors for at least 18 months.

FKB says that the acquisition will take the company into a specialised area, which it would have difficulty developing otherwise.

## WB £6m rights and purchases

By John Riddling

WB INDUSTRIES, the Midlands-based manufacturer of springs and presses, yesterday announced the acquisition of two spring manufacturers and a five-for-two rights issue to raise about £5.7m.

The acquisitions are the latest and largest step in the restructuring of the group after it came under new management in April when Mr Graham Avery replaced Mr David Cooper-Smith as chairman. Since then, the capital structure has been rationalised and a number of spring manufacturing companies have been acquired.

WB is buying Elson & Robbins, which supplies spring units to bed manufacturers and makes vehicle seats, and CMT Springs, which makes coiled springs. WB is also taking a 75 per cent stake in Infotock, a company which has entered into a conditional contract to acquire a specialist gearbox business and certain assets of Bus Engineering group.

The combined consideration for the acquisitions is to be satisfied by a payment of about £4.4m in cash and the issue of 2.04m new shares.

In 1988, E&R, which is by far the largest of the acquisitions, achieved pre-tax profits of £964,000 on sales of £15.44m. The fall in profits from £1.65m in 1987 reflected production difficulties following a change in specification of foam raw materials and the costs incurred in the modernisation of its bed spring factories.

The cash element of the consideration will be met through the rights issue. Shares are priced at a deeply discounted 25p, reflecting the fact that the rights issue is not underwritten.

Mr Avery said that "the acquisitions represent a major step forward by the company under its new management to become a market leader in the spring industry."

## Heywood Williams £7.5m acquisition

By Clare Pearson

HEYWOOD WILLIAMS, the glass and aluminium product specialist, is adding to its interests in plastic extrusion with the purchase of Gloucester-based Glostar Plastics for a maximum consideration of £7.5m in cash.

Mr Michael Broadhead, finance director, said Gloplas provided an opportunity to build on Heywood Williams' initial move into plastic extrusion with the purchase of Vinyl Window Systems, also based in Gloucester, in March.

But the main focus of the company's acquisition strategy remained the Continent, he said. Continental and US operations accounted for all Heywood Williams' growth in profits to £15.31m (£13.1m) in the half-year to end-June.

The initial consideration for Gloplas is £2.81m. An additional consideration is payable up to the equivalent of 2.5 times pre-tax profits in excess of £500,000 per annum for the period from 1st July 1989 to 31st 1991. Gloplas made pre-tax profits of £390,928 on turnover of £3.86m in the eight months to end-June.

Mr Ralph Hinchliffe, Heywood's chairman, warned in August that high interest rates in the UK were reducing demand for the group's products.

# GRANADA GROUP PLC

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This announcement appears as a matter of record only.



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 The Tokai Bank, Limited



# FINANCIAL TIMES SURVEY

## The exchange of ideas is nothing new, but industrialists, politicians and scientists throughout

the world are attaching greater importance to research and development. Technology transfer, reports Clive Cookson, is now the buzz phrase of economic policy

## Spreading the word on ideas

PEOPLE HAVE been transferring technology ever since the first stone age tribes exchanged ideas for making flint implements. But only in the 1980s has technology transfer been generally recognised as an important activity for stimulating economic growth.

Technology transfer is now a buzz phrase of industrial policy. Governments worldwide are changing their support for industrial research and development in a way that requires companies to work with other companies or with university partners in collaborative projects designed to facilitate technology transfer.

Besides these collaborative research programmes, governments are encouraging technology transfer directly through programmes to disseminate scientific and technical information and to put companies in touch with sources of innovation. In the UK, the Department of Trade and Industry spent £22m in 1988/89 and expects to spend £124m in 1989/90 on technology transfer activities.

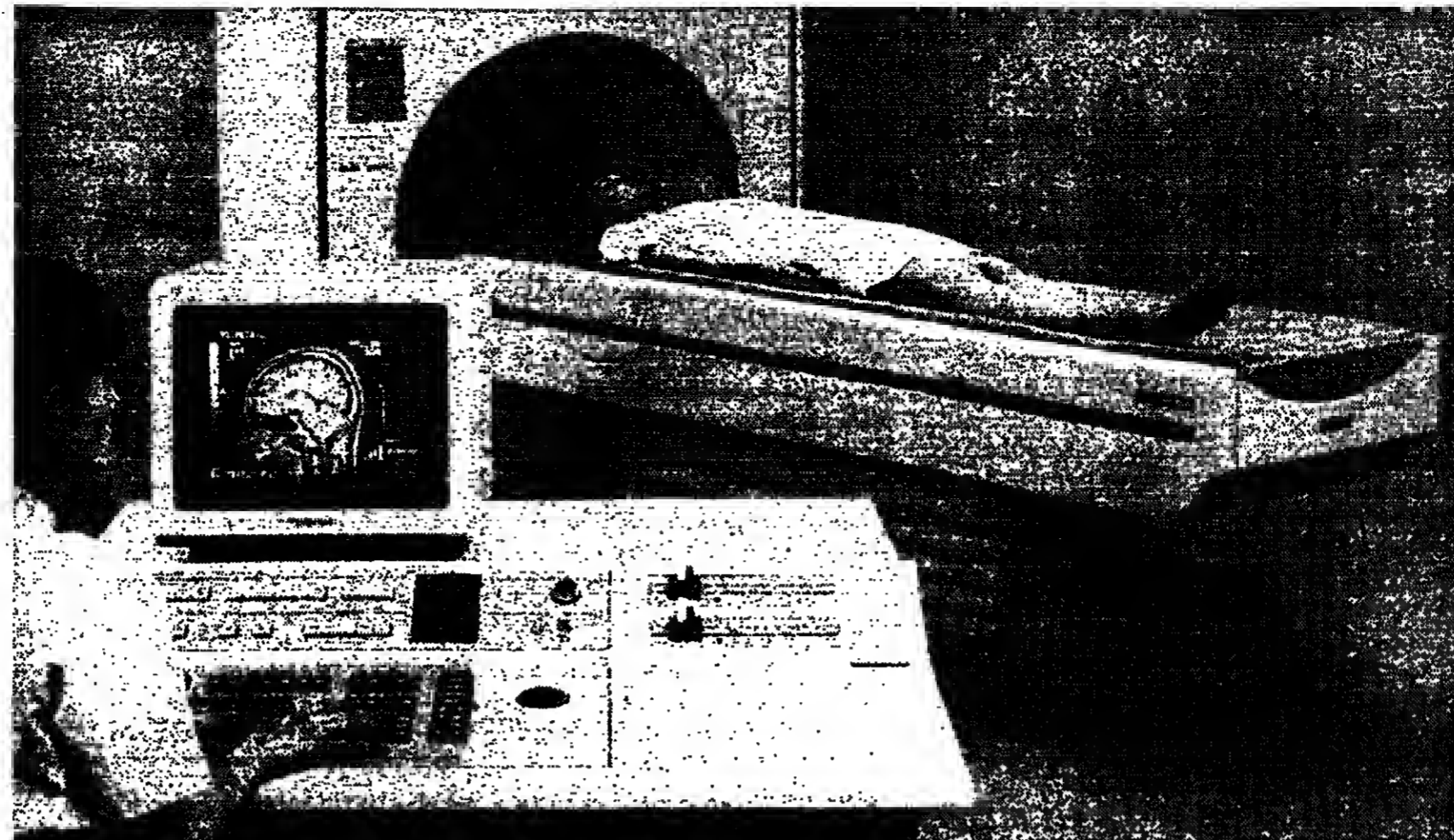
Companies are doing more to seek out technology that might be worth exploiting. They are looking in universities and research institutions and in other companies, large and

small, at home and abroad. Many large companies have a clearly defined technology transfer unit, whose mission is to bring in ideas from outside and/or to find partners to help exploit in-house developments.

One example is Project Extra, run by GKN, the UK engineering group, in Europe and the US. The Project Extra team works to seek out and support the development, production and marketing of automotive components originated by third parties. During the three years it has been in existence, Project Extra has examined hundreds of proposals from individual inventors and companies, and several are close to being manufactured and marketed by GKN.

"Project Extra is meticulous in advising inventors on the importance of patent applications when negotiating with a large company such as GKN," the company says.

The increasing importance of technology transfer to government and industry is stimulating the growth of independent technology brokers, who make a living as intermediaries between sellers and users of technology. They range from individual technology transfer agents to the state-owned British Technology Group (BTG),



Breakthrough in medical diagnosis: Magnetic Resonance Imaging, licensed by British Technology Group to healthcare groups in US, Japan and Europe

# Technology Transfer

which was formed out in 1981 through the amalgamation of the National Enterprise Board and the National Research and Development Corporation and claims to be the largest technology transfer organisation in the world, with more than 2,700 licensing agreements to its credit.

Most brokers still concentrate on the limited role of arranging a licensing agreement between the originator of the technology and the company exploiting the work. But there is a growing trend for technology transfer companies to play a much wider role - helping with market research, business planning and fund-raising.

Some technology transfer companies result from initiatives to commercialise research carried out in large government agencies. A striking UK example is Defence Technology Enterprises (DTE), set up four years ago through a joint initiative by the Ministry of

Defence and a consortium of venture capital companies. More than half of all UK government R&D spending is for defence, and some science policy analysts argue that most of this is, in commercial terms, wasted. Indeed it has been claimed that the UK's high spending on defence research compared to other countries has starved civil R&D of funds and is partly responsible for the country's poor industrial performance since the war.

DTE is intended to counter such criticism by identifying developments in MoD research establishments which could have civil applications, and then helping to commercialise them. The record so far is encouraging. DTE already has 50 licensing deals to its credit and several of the resulting products are being marketed internationally. DTE expects sales of "many hundreds of mil-

lions of pounds" over the next decade.

Drawing on its experience with the MoD, DTE is moving on to commercialise technology from other sources, including non-military government laboratories and large companies such as British Aerospace.

Another big new player in the technology transfer market is AEA Technology, the commercial arm of the UK Atomic Energy Authority. Its mission is to apply outside the nuclear industry the very wide range of technological expertise which the AEA has acquired as the body responsible for developing nuclear power in the UK.

With government spending on nuclear R&D expected to fall over the next few years, AEA Technology is an ambitious attempt to fill the gap by bringing in millions of pounds a year from industry. Its activities span aerospace, defence, oil and gas, manufacturing,

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Japan; USSR; Financing 4

laboratively sponsoring research in a particular industrial field. Today they are far more responsive to the needs of the market, and depend on specific industrial contracts for research, development and consultancy.

These organisations have become more commercially oriented, controlled by boards of directors rather than councils of members. And they have dropped their old-fashioned names in favour of snappy acronyms: there is no quicker way to irritate one of the new breed of managers at, say, Pera or Sira than to refer to the Production Engineering Research Association or the Scientific Instrument Research Association.

Ten years ago, such organisations were rather moribund industrial research associations, dependent on government contracts and on income from member companies col-

TECHNOLOGY	CLASSIFIED TECHNOLOGY	CLASSIFIED TECHNOLOGY	CLASSIFIED TECHNOLOGY	CLASSIFIED TECHNOLOGY	CLASSIFIED TECHNOLOGY	CLASSIFIED TECHNOLOGY
<b>Electrical</b>	<b>Engineering</b>	<b>Medical</b>	<b>General</b>	<b>Material and Processing</b>	<b>Liquid Crystal</b>	
<b>High Quality Monochrome Colour Converter</b> Liquid crystal based system which produces colour VDU (including TV) displays with similar resolution to monochromatic displays. Ref. No. SIL101	<b>Environmentally sealed, low-profile tactile keypad of proven design and application. Includes integral back light and full key travel with high integrity suspension.</b> Ref. No. SIL103	<b>Faculty of Engineering</b> Works with large and small companies on design and manufacturing to key new areas including the SERC, automotive design programmes and the biomedical engineering centre, advanced materials/processes, moulding machinery and power electronics. Ref. No. SIL122	<b>A photo-fabrication technique for 3D circuit using laser light to inscribe the circuit lines: obviating the traditional photographic mask and saving production time and labour cost.</b> Ref. No. SIL104	<b>Robots Milk Cows</b> A novel visual/sensor system can help the location of the test-cup array. Ref. No. SIL128	<b>Clinibase</b> A sophisticated but user-friendly database and word processing system designed specifically for the Doctor's Office. Combines computerised record system with a word processing system enabling rapid production of all types of medical documentation. Ref. No. SIL134	<b>Chromosome Analysis</b> A two-key vision system for routine clinical screening has been developed. It automates much of the analysis task and increases laboratory throughput by a factor two. The first full-scale clinical installation was commissioned in 1985 and there are currently more than 30 systems in use throughout the world. Ref. No. SIL147
<b>Laser Beam Focusing/Launching System</b> Laser beam greater than 2mm diameter launched directly into a fibre optic system without sophisticated focusing. High transmission efficiency enables long fibre optic leads to be used. Joining losses of 30% can be tolerated. Ref. No. SIL102	<b>A single control panel, instructor driven via analogue keypad and switches. Fully illuminated on display. Photocopyable to produce operator manuals to process operations.</b> Ref. No. SIL105	<b>Solid/Liquid Nebuliser</b> A simple system has been developed for the production of very fine droplets/particles of liquids, solids or liquid/solid suspensions without the possibility of the blocking of jets to the nebuliser head. Ref. No. SIL123	<b>Multiple Strain Gauge Monitor</b> A microcomputer based system to provide a highly accurate automated method for the monitoring of resistance changes in a multiplexed system of many strain gauges. Developed for the Jodrell Bank radio telescope. Ref. No. SIL130	<b>Biologically Imperious Sheath</b> A disposable, elastic transparent sheath of translucent, biologically imperious material, which can be easily placed over any medical appliance before placing in a patient's mouth, e.g. a thermometer or light pen, in such a way that neither the appliance nor the hand holding it is contaminated by the patient. Ref. No. SIL136	<b>Automated Vision Systems - Low-cost Cervical Smear Prescreening System</b> An automated pre-screening of routinely prepared specimens by an automated vision system provides a low cost primary health system for use in health centres and general practice clinics. Ref. No. SIL142	<b>High Efficiency Ear mould</b> Cold-cured composites are moulded in the clinic and immediately fitted, using simple manipulations, to the hearing aid. Avoids many problems associated with provision of hearing aids to child patients. Ref. No. SIL148
<b>Smart Burglar Alarm</b> A programmed intruder alarm which is activated by sequential events common to the majority of burglaries offers a significant reduction in "false" soundings of intruder alarms. Ref. No. SIL107	<b>Practical Help for Inventors</b> A one stop shop offers free advice to inventors in the Wessex area on developing prototypes, patenting, raising finance, marketing etc. for innovative products. Readily available grants are available but specialised help in this difficult field. Ref. No. SIL109	<b>Emission Treatment</b> A new method has been devised for reducing particulate emission from engines. Ref. No. SIL124	<b>Automated Vision Inspection - Brake Inspection</b> Fully integrated vision inspection system developed for the shop-floor. High-speed operation achieved by combining sophisticated model-based software with high performance hardware has been applied to a range of inspection problems. Ref. No. SIL125	<b>Barrier Materials</b> High performance barriers based on paper and non-woven fabrics can be converted using barrier conversion technology. Enhancement of barrier properties achieved with little effect on air permeance. Ref. No. SIL132	<b>Cervical Matrix System</b> This system comprises professional disposable cervical matrices for dental transmission in a range of sizes and shapes and a range of reusable retaining change. Ref. No. SIL143	<b>Blood Measurement - 1</b> This laser-Doppler based device for the measurement of the flow of blood in the skin and sub-cutaneous tissue measures the blood flow by comparison of the scattering effect measured with a reference beam. Useful in many clinical conditions, e.g. Raynaud's disease. Ref. No. SIL151
<b>Marine Technology</b> - geophysical survey systems - analytical and monitoring services - plant design marine plus specialist training Ref. No. SIL108	<b>Fire Detection System</b> Early warning fire detection system, provides pre-ignition warning using wireless and advanced computer software. Easily installed. Very useful in high security applications. Patented. Ref. No. SIL110	<b>Automated Vision Systems - Crack Detection</b> An automated vision system capable of detecting surface cracks in a rate of one every 2.5 seconds with excellent false positive, negative response. Ref. No. SIL133	<b>C.V.D. Mullerlyer hand material coatings on H.S.S. cutting/forming tools - a route to significantly enhanced tool performance.</b> Ref. No. SIL126	<b>Improved Spermicidal Contraceptives</b> A two component viscoelastic/bacteriocidal spermicidal composition using conjugates of known spermicidal activity has produced a major synergistic improvement in contraceptive activity which may result in the possibility of significant reduction in the amount of active component used without reduction in contraceptive efficiency. Can inhibit transmission of STD's including HIV. Ref. No. SIL138	<b>Long Life Blood</b> The first jet 60 was designed and used for the purpose of aortic aneurysm. The injector has a dose range of one half (1/2) to 30 units of U-100 insulin. Ref. No. SIL150	<b>Dental Endosteal Filling Material</b> A new multiphase, bacteriocidal material for root canal filling offers both a dense and a novel bacteriocidal material and provides a superior material to glass particles traditionally used. Ref. No. SIL152
<b>Rapid electro-deposition processes can now be further enhanced by novel methods of agitation and current pulsing techniques.</b> Ref. No. SIL111	<b>Single crystal, polycrystalline and amorphous materials: production; structural, electrical, magnetic, thermal and optical characterisation from 20mK to 1,300K and in magnetic fields up to 1T.</b> Ref. No. SIL114	<b>Nanoscale Scale Investigation of Interfaces in Composites using High resolution electron microscopy is being used to explain variability in properties and structure.</b> Ref. No. SIL119	<b>Materials optimization for nuclear reactor core best investment reduce irradiation embrittlement for core components of austenitic steels.</b> Ref. No. SIL117	<b>Thermochromic Liquid Crystal Temperature Indicator</b> Thermochromic liquid crystals have been developed which permit indication of predetermined temperature to within ±1°C. Techniques have also been developed for the application thereof. Ref. No. SIL153	<b>Safety Sheath for Hypodermic Needles</b> A new type of injection needle sheath which, eliminates accidental injury to the user on re-sheathing and incorporates a device which effectively prevents accidental do-sheathing after initial disposal. Ref. No. SIL145	<b>Pressure Sensors</b> Liquid crystal materials which undergo optical changes when subjected to pressure changes can be used to facilitate remote sensing of pressure. Use of fibre optic link enables sensing to take place in hazardous environment. Ref. No. SIL155
<b>Adhesion of surface coatings to plastic substrates depends substantially upon the current performance and development of a new development can greatly enhance interfacial performance.</b> Ref. No. SIL113	<b>Grain boundary segregation models have been developed to predict low temperature intermetallic diffusion in copper and electronic materials.</b> Ref. No. SIL115	<b>Materials Mechanics Group has set up a facility for investigating the high strain rate properties of metals, polymers and composite using blast wave and projectile impact methods.</b> Ref. No. SIL120	<b>Low cycle fatigue and life predictions for materials in aero engines and nuclear reactors are now feasible using high cyclic stress data.</b> Ref. No. SIL118	<b>Remote Temperature Sensing and Switching</b> Use of thermochromic liquid crystals in tip of long fibre optic link facilitates remote temperature sensing. Ref. No. SIL121	<b>Remote Temperature Sensing and Switching</b> Use of thermochromic liquid crystals in tip of long fibre optic link facilitates remote temperature sensing. Ref. No. SIL121	

**MATCHING KNOW-HOW TO KNOW-WHO!**

We have been advertising our technology marketing services in the FT since June. We have now received about 50 responses - some very interesting UK blue chip enquiries, but about 30 overseas enquiries. It would appear the FT's Technology Page and the FT's "Technology Market" have a very wide international readership, including Kenya, Indonesia, India, Japan, Brazil, the United States, and some of the EEC countries.

Advertising, as we all know, is an expensive business, but dipping our particular toes into advertising in the FT has proved to us to be very cost effective.

This "Classified Technology" idea is simply to help those with low-to-zero promotional budgets in small companies, R&D Departments, Universities, Polytechnics, the inventing public, to get their message across, and promote their ideas - inventions - patents - licences - to the international market place for £100/£200 plus VAT per insert.

Whether this one half page advertisement in the FT will develop into a regular "Classified Technology" advertising format, I have no idea. I thought it was worth trying as a pilot exercise just to see what the response to both advertiser and the concept would be.

Today's advertisement comprises technology offerors, but if "Classified Technology" develops, it will obviously appeal to technology seekers as well because of the FT's considerable overseas readership.

The SIL box number response system is to protect confidentiality and to keep the space cost down. We will just fax responses to the originators of each advertisement, and copy you.

If you think this "Classified Technology" idea merits further discussion or support, please contact: Paul Cautley

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TECHNOLOGY TRANSFER 2

Clive Cookson on Whitehall's change in attitude

Collaboration is the name of the game

THE ATTITUDE of governments to technology transfer has changed radically over the last decade or so. Governments have not only set up a host of programmes specifically to encourage technology transfer but also, and more significantly, they have overhauled the structure of support for industrial research and development in a way that forces companies and institutions to work together on R&D projects.

The largest UK programme for university/industry research is Link

to support technology transfer more directly. These include:
• Four specific programmes designed to spread information about advanced information technology, open systems, advanced electronics and materials. These are intended to increase the awareness of the latest technological developments in these fields, through a mixture of brochures and videos; workshops, seminars and conferences; case studies; advice from centres of expertise; and demonstration projects where users can practical examples in action.

Shelmersdale, Lancashire, it is a thriving network with more than 100 members, ranging from multinationals and universities to small companies with only a handful of employees. The heart of Nimtech is a computerised directory of the technology available from or sought by member organisations, and there is a group of technology transfer managers to help forge technological links between them.



National Physical Laboratory, one of four DTI research centres

organising these clubs.
• Transferring technology from overseas. A recent report from the National Economic Development Office on technology transfer mechanisms points out the "disturbing" fact that the UK has a "positive balance of trade" in international know-how exchanges. It gains more money from licensing British technology overseas than it spends importing technology, this is in marked contrast to Japan which has a large negative balance.

commercial/economic posts elsewhere, the NEDO report says: "In comparison to the vigorous efforts of the Japanese, the British commitment to technology importation is hardly impressive."

There is much commercial activity in academia

Little time for play in the science parks

EXPECT A quickening in the pace of technology transfer activities in Britain's universities and polytechnics over the next few years, as higher education sets out to raise more finance from the private sector.

Table titled 'GROWTH IN UK SCIENCE PARKS' showing data for years 1985, 1986, 1987, and 1988. The table includes categories for Operating, Under Construction, and Planned parks.

The changed climate in higher education in the 1980s has provided most universities and polytechnics to become more professional in their relations with business over the past few years.

Government Ministers never tire of exhorting the country's higher education institutions to forge closer links with industry. Research programmes, such as the Alvey work in information technology were constructed with the express purpose of encouraging closer collaboration between academia and business.

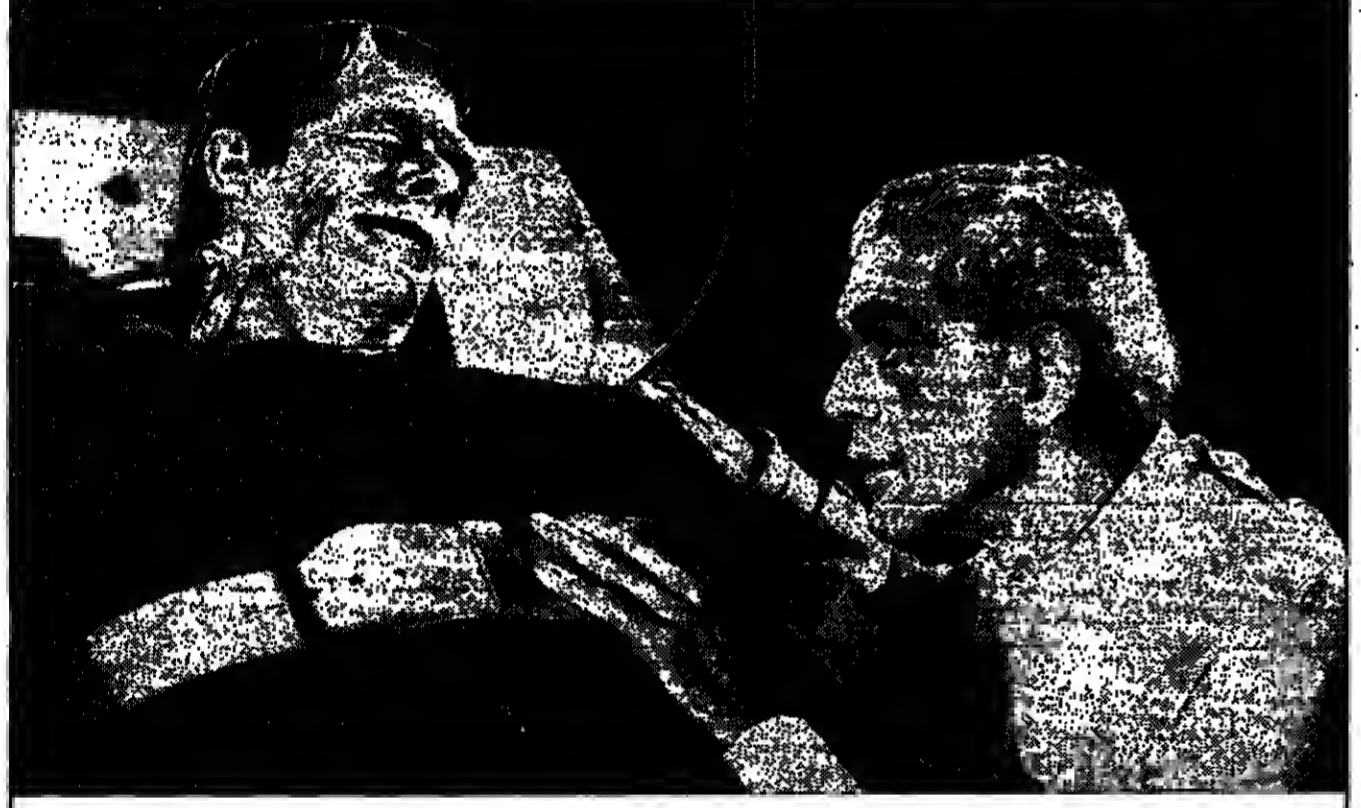
In 1982, there were just two science parks: at Cambridge and Edinburgh

The Government has underpinned these exhortations by squeezing its flow of cash to the colleges and equally importantly making it clear that the country's academics will have to look to the private sector to fund the bulk of any expansion in their sector.

Perhaps the most visible is the science park movement. In 1982, there were just two science parks: at Cambridge and Edinburgh's Heriot-Watt university. Cambridge still boasts the best known and easily the largest of Britain's science parks, but in the mid-1980s many other universities followed its lead.

The science parks have acted as a focus for genuine high tech companies, with electronics and chemical/pharmaceutical concerns providing the majority of the 307 companies housed on their usually elegantly landscaped sites.

Yet the new wave of science parks may not meet all the hopes of their academic sponsors, once the winners sort themselves out from the also-rans.



ARE YOU DOING ENOUGH RESEARCH BEFORE DEVELOPMENT?

Allowed to go too far, ill-conceived new product ideas have a horrible tendency to take on a ghastly life of their own. They can wreak havoc with costs, leaving a trail of horrified shareholders behind them.

and technical information from databases containing details from over 20 million patents published worldwide.

An unrivalled source of information, most of which is unavailable elsewhere and free for unrestricted use. Which means that once a new product idea is run past one of our team of over 200 experts, he can immediately start a related search.

Our computers can call up commercial

What you do with this information is, of course, up to you. But it's bound to help your planning.

The Patent Office

TRRL RESEARCH FOR INDUSTRY
£12,000 million is planned to be spent on Britain's roads programme in the next 10 years. Invest in R & D now and reap rewards in the 1990s.

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Why is the world not beating a path to your door?
Your technical ability may be second to none and your product outstanding...

TECHNOLOGY TRANSFER 3

LICENSING AND PATENTS

The protection of innovation

WITH A novel idea, the simplest and cheapest course of action is to do nothing about legal protection - either keep the idea secret for as long as possible or regard the idea as public property. Either way, no third party will pay royalties on an unprotected invention, so the inventor cannot hope for any financial reward. Worse still, someone else may apply for legal protection and obstruct the true inventor's progress.

Patenting is only one of several ways to protect innovation, but the other forms of protection, such as registered trade mark, design or copyright, will often not be available or be of limited value.

A patent covers any idea which can be applied to industry, for instance a process for making something, a product made or a way of using it. The idea must be new and not an obvious extension of what is already known. A patent lasts for up to 20 years in the UK and Europe, but heavy annual renewal fees must be paid to keep it in force.

In the US, patents last for 17 years with renewal fees payable every four years on patents filed after 1980. There are two vital differences between the Europe and US.

First, in the UK and Europe, a patent is invalid if the inventor has published the novel information before filing, whereas in the US there are provisions which sometimes allow inventors to talk first and file later. The safest course of action is for inventors to say nothing, other than in confidence, until after a patent application has been filed.

Second, in the UK and Europe, patent applications are published while pending. This allows the chance to see what monopoly an inventor is claiming and object to the Patent Office if there are grounds to contest validity. In the US the situation is quite different; applications remain secret until granted.

Without valid patent protection, there can be no hope of financial reward from technology transfer. Even a know-how licence is usually no more successful than DIY patenting. In theory the Patent Office will deal with an inventor, offering helpful advice.

In practice this is dangerous for the inventor, because no amount of helpful advice from the Patent Office can repair the damage done by filing an inadequate application. If technical details are missing from the initial application, they cannot later be added. The only safe way to file a patent is with the help of a qualified patent agent. But choosing a patent agent can be difficult because the profession strictly limits advertising, and potentially disastrous changes in the law will soon allow anyone to practise as a patent

A patent covers any idea which can be applied to industry

agent, irrespective of experience. "It's illogical, and it puts the public at risk," says Ms Jacqueline Needles, of the Chartered Institute of Patent Agents in London.

The Institute publishes a list of qualified agents which is kept in some public libraries. Word of mouth recommendation can be valuable.

Universities and research institutions may find it easier to entrust inventions to the British Technology Group. BTG offers a one-stop service and - following loss of monopoly privileges and the threat of privatisation - it has recently worked hard to shake off its aloof image.

Qualified patent agents' fees are high because they need a curious mix of technical and legal skills. Winning a British patent can cost more than £1,000. Other countries have similar or higher fees with annual renewals on top. Contrary to popular belief, and bluff talk by entrepreneurs, there is no such thing as a world patent.

Applications are handled by government Patent Offices and apply only to the country of grant. Two schemes, the European Patent Convention and the Patent Co-operation Treaty, which is administered by the World Intellectual Property Organisation in Geneva, make things easier and cheaper for inventors who want to file in several coun-

tries. Both schemes came into force in 1978.

The PCT gives an inventor the chance to file a single patent application in one country and pay for them all to be searched. After 18 months the PCT publishes the pending application and search report in patent libraries around the world.

The PCT scheme does not grant patents. This is done by national Patent Offices, or the European Patent Office, which honours the PCT search result. National offices grant patents for their own country, the European Patent Office grants a bundle of patents for up to 13 European states.

Spain recently signed the PCT and from November becomes the 42nd country to participate. Greece is the only country in Europe that is not party to the PCT although it is party to the European Patent scheme. Greece is expected to join the PCT to bring the dream of a true "world patent" closer to reality.

Trademark registration protects a name for any goods (and now service). There is no limit on the potential life of a trademark registration, provided renewal fees are paid. The first trademark, Bass for Beer, was filed over 100 years ago and is still going strong.

Trademarks can be very valuable. Under the consumer protection laws if a customer asks for goods by name, and is given something similar but not identical, the salesman is at fault. Hence the value of trademarks such as Coca-Cola and Pepsi-Cola.

Trademarks can die, however, through misuse. If the public took to calling every cola drink coke, irrespective of origin, the word could become generic and lose its status as a mark. This is what happened to the word aspirin, once a trademark.

The appearance of a product can be protected by paying for a registered design, or by free copyright. The law on both changed on August 1 when the Copyright, Designs and Patents Act 1988 replaced the Copyright Act 1956.

The new Act seeks to tie

down, once and for all, the extraordinarily muddled situation which arose under the 1956 Act when manufacturers claimed free artistic copyright in mechanical products, such as spare parts for cars and electrical equipment.

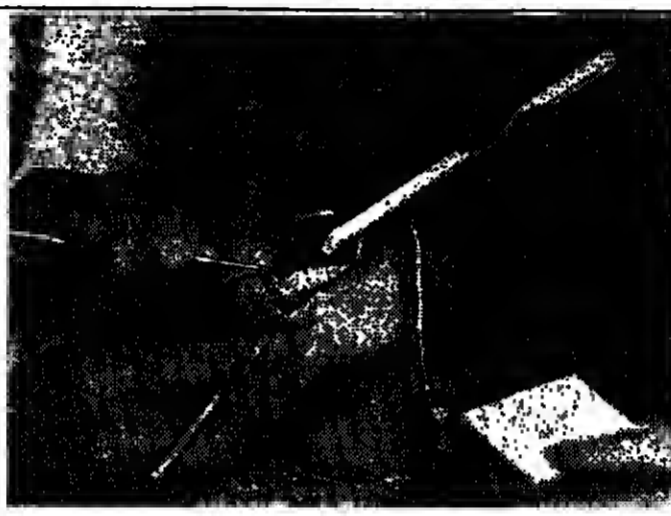
The new law gives no copyright monopoly to manufacturers if a spare part must be shaped in a special way to fit or match the original. But where a product looks original, and there is no must-fit constraint, the manufacturer automatically, and without cost, gets copyright protection through the new unregistered design right provision.

The new right lasts for 10 years, but licences of right are available for five years. This means that anyone who wants to copy the design can demand a licence, with royalty payments if necessary, arbitrated by the Patent Office.

The old provision for registering an industrial design, by paying a fee, remains in the act. But the life span of a registered design has increased from 15 to 25 years and the law has been tightened.

Where there is no design freedom, because the design of a part is determined by the design of the whole, there can be no registration, even if the design looks novel to the eye. The idea is to make registered design protection available only for truly aesthetic, decorative industrial designs.

Barry Fox



Glass ionomer cement: invented at the Laboratory of the Government and developed with financial support from BTG

A small UK agency is suing the Pentagon, reports David Fishlock

The high price of a good secret

BRITAIN HAS developed some sophisticated mechanisms for technology transfer which are beginning to attract wider attention. The well-established British Technology Group and the newer Defence Technology Enterprises are unique activities that offer lessons for other technology brokers.

Penicillin was discovered in a London hospital and a nearby pub called the Sir Alexander Fleming commemorates the event. Then came the Second World War and an urgent need for the world's first antibiotic. But Britain lacked both the resources and the engineering skills to prepare for large-scale fermentation. It went to the US for help - and found it.

After the war, however, word got around in Britain that someone had "given away" its discovery. The Government vowed it should not happen again and in 1948 formed a state-owned organisation called the National Research Development Corporation, to protect the intellectual property rights of scientists and inventors funded by the public sector in universities, hospitals, national laboratories, etc.

The job of the NRDC was to manage the development of research discoveries and inventions. From the start it built a strong legal side. This paid off handsomely when Oxford University discovered a second generation of antibiot-

ics called the cephalosporins. They were patented worldwide and the royalties secured the financial base of the NRDC for many years.

This organisation has been used - and abused - in different ways by different governments. Now it is called the British Technology Group. It claims to be the world's biggest organisation specialising in technology transfer.

The BTG is currently suing the Pentagon for tens of millions of dollars for allegedly infringing its patents on Hovercraft.

In the 1950s a private inventor brought the idea of an air-cushion suspension for the agency to manage. It set up a subsidiary called Hovercraft Development which patented the skirt retaining the air-cushion. BTG alleges that the Pentagon has bought \$500m-worth of hovercraft using its patented skirt.

The very idea of a minuscule foreign company, employing only 150 people, suing the Pentagon may seem amusing. But BTG has already taken on the world's biggest electrical groups and won.

At issue was nuclear magnetic resonance (NMR) imaging, alternatively known as magnetic resonance imaging (MRI), invented in British universities. BTG has compiled an impressive portfolio of patents it believes covers most such imaging systems sold throughout the world.

Until two years ago very few manufacturers outside the UK heeded BTG's claims. Then Johnson and Johnson, the US healthcare group, capitulated to threats of legal action. Soon after, US General Electric, the market leader, settled and paid BTG several million dollars. This windfall was shared by BTG with dons at Nottingham, Aberdeen and Oxford universities.

Gradually BTG's commercial people have persuaded other NMR makers, such as Toshiba and Siemens, to follow suit. The royalties, and the payments to some impoverished dons, are doing wonders for its image as a technology broker.

It has also opened an opportunity that BTG is exploiting. Johnson and Johnson - a company with which BTG has enjoyed good relations until the imaging issue erupted -

was evidently impressed by the tenacity with which BTG pursued what it believed were its commercial rights.

The healthcare group had already abandoned plans to make imaging systems. It invited the UK company to take over a portfolio of nearly 100 inventions relating to medical diagnostic imaging and manage development, sharing any royalties between them.

This windfall of intellectual property has doubled BTG's normal intake of new inventions this year. BTG believes it

can repackage the portfolio in various ways to open markets for imaging in such activities as non-destructive testing for engineering, and quality control in the food industry, as well as for medicine. The deal has given a fillip to BTG's plans for internationalising its operations.

Historically BTG has worked almost exclusively on behalf of British inventions. Now it is getting the idea that many overseas companies may have portfolios of under-developed inventions crying out for its skills in technology transfer and the securing of intellectual property rights. BTG is convinced intellectual property rights is a greatly under-valued resource, says Mr Ian Harvey, chief executive. Companies are constantly shelving ideas and inventions, not because they won't work but for lack of cash or the right people, for changes in corporate strategy, for a myriad of commercial reasons.

That is why BTG will continue to pursue the Pentagon. It has ample funds and the commercial freedom. It wants to be seen to be willing to fight long and hard on behalf of its inventors, whether they work in an academic cloister or for a corporation.

Between these two extremes, BTG has identified a host of highly innovative start-ups in advanced technologies, especially in the US, which have not begun to think of penetrat-

BTG has worked almost exclusively on behalf of British inventions

ing Fortress Europe. BTG is already inside the citadel - just like the ferrets I come to next.

Another technology transfer mechanism Britain is perfecting is embodied in the activities of a small venture called Defence Technology Enterprises, a private venture, owned jointly by several financial institutions. DTE was invented in 1983 as a way of transferring technology from Britain's defence research establishments into the commercial sector. It is a mechanism for penetrating their tight security fences and taking a cool look at the commercial opportunities within.

DTE has been infiltrating what it calls its "ferrets" inside the fences of all but the Atomic Weapons Establishment. These ferrets are technical folk - some have even worked in defence research establishments. As ferrets they have offices inside the security fences and are free to roam, to see, to talk about the commercial opportunities.

They have been ferreting for about three years. The important point is that they have been ferreting with top-level encouragement in the Ministry of Defence.

Initially, DTE saw itself as a technology broker with unique rights of access. After three years it has realised that to succeed commercially it must be much more than a broker. It must be willing to back the ideas that its ferrets find with more cash for development, to turn them into demonstrations credible to a potential commercial market.

That means a lot more money must be found, more risks taken, than were envisaged at the start, says Mr Bernard Herdan, managing director. The company has begun to look more widely for financial backing, abroad as well as in Britain.

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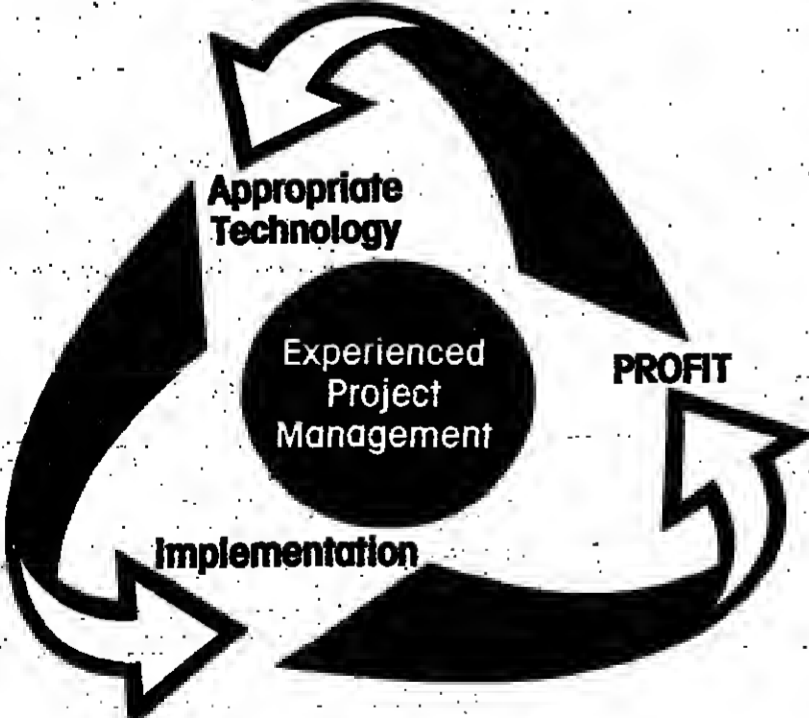
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**TECHNOLOGY TRANSFER 4**

Michiyo Nakamoto on Japan's creaking barriers

**Turning a one-way flow**

JAPAN HAS a long history of learning from others and for most of its recent past technology transfer was a one-way flow from the West. Over the last 100 years Japan has been driven by a desire to catch up with the industrialised world and has been preoccupied with soaking up the scientific and technical advances made in Europe and the US.

It is only in the past few years, as Japan's closed society was increasingly seen as a likely cause of the country's persistent and much-criticised trade surplus, that the Japanese woke up to the importance of sharing their recent technological success.

The Government is encouraging easier access to Japanese R&D from abroad. The spreading globalisation of industries is encouraging businesses to join hands increasingly across national borders. The indications are that the doors to Japanese technology are slowly being opened. This trickle, however, is likely to resemble a flow in the near future.

The Japanese Government is eager to present an image of openness. Claims by the US that the closed nature of Japanese society is in part responsible for its trade surplus makes the country's history of deficits in technology transfers something of an embarrassment.

Pressure on Japan to play an international role in keeping with its status as a leading economy has made it more necessary to promote greater access to Japanese R&D.

Tokyo is particularly sensitive to criticism from the US that it is selfishly keeping its technological achievement to itself. The US accounts for over 60 per cent of technology transfers to Japan. In 1987, the Japanese ran a Y106.5bn deficit with the US and a Y63.1bn deficit with western Europe.

Such criticism led Mr Noboru Takeshita, the former Japanese Prime Minister to agree last year with Mr Ronald Reagan, US President in office at the time, to facilitate access to Japanese science and technology research. Last spring, the Ministry of Foreign Affairs set up a scientific technology task force. A report published by the task force in June emphasised the increasingly important role that co-operation in scientific technology played in foreign relations.

Recent statistics, however, suggest that such efforts still have a long way to go. The number of new cases of technology transfers actually fell from 1,730 in 1986 to 1,655 in 1987, according to a report published in March by the Agency of Industrial Science and Technology. Figures released by the Bank of Japan indicated that Japan paid Y94bn for licences, patents and royalties in 1987. This was more than three times as much as it received.

Part of the difficulty is that most of the technological advances that foreigners are interested in is done in the private sector and the Government cannot force a private company to supply information on its R&D activities.

Japanese experience in trying to catch up and finally overcome the West has perhaps made the Japanese more reluctant to share in the fruits of their labour and suspicious of possible competition. Industry leaders are not as self-confident as their US counterparts were in the earlier part of the century although Japan enjoys its status as the world's largest creditor nation.

Mr Isao Idota, president of Technology Transfer Institute (TTI), a private organisation which helps companies arrange technology exchanges, regrets that Japanese compa-

nies are still far from forthcoming in their attitude towards foreigners.

Meanwhile, the traditional practice of lifetime employment reduces the chances of technology being transmitted through skilled personnel.

While the Japanese have recruited hundreds of technicians to teach them western skills, the only people Japanese companies will willingly send on technical transfer missions are men near retirement.

While such attitudes and the widespread image of Japan as an inaccessible society may discourage foreigners from seeking Japanese advances in technology, a lack of interest, at least on the part of the West, also helps perpetuate the lopsided situation.

Language is also cited, particularly by westerners, as a large difficulty in transferring technology from Japan.

The problems in technology transfers to developing countries are of a different nature. "It's a pitcher and catcher relationship," said Mr Idota. "If you throw the ball and the other side isn't ready, it's a disaster."

In spite of all the barriers, the unchallenged lead that Japan enjoys in certain industries makes it inevitable that more and more technology will flow out of the country.

At the same time, the increasing globalisation of industries and fear of protectionist measures are encouraging more Japanese companies to form licensing agreements with companies abroad.

"Europe's single market in 1992 has been the biggest trigger for technology transfers from Japan," says Mr Idota. "More Japanese companies are ready to license technology since nobody wants to be left out."

WHEN Mikhail Gorbachev seized power in the Soviet Union four years ago, one of his prime co-conspirators was technology. Or, to be more exact, the lack of it.

It was the realisation of the rapidly expanding technological gap between the Soviet Union and the industrialised West, in spite of massive spending both on military hardware and on space, which persuaded important pillars of the establishment to opt for the radical reformer.

"Today, although the Soviet Union has one of the world's largest scientific workforces, it has only a modest record of achievements," said Mr Roald Sagdeyev, director of the Soviet Space Research Institute. "For too long, Soviet science has hidden its inadequacies behind official panegyrics to its success. Science has its own criteria for success, and Soviet achievements have not measured up to them."

Traditionally, the view has been that Soviet science has been strong on fundamental research, but weak on its application. Mr Sagdeyev, an outspoken member of the new Congress of People's Deputies, calls even that into question.

"We have long been used to castigating ourselves for being unable to translate effectively the results of fundamental research into practice," he wrote last year in *Izvestia*, the official government newspaper. "It is high time we sorted out honestly and objectively the causes of the crisis experienced by fundamental science."

More than anything else, he blames the creation of a massive scientific bureaucracy — perhaps 1.5m strong — raising artificial barriers to interdisciplinary communication, preventing labour mobility, and stifling original research.

That thesis is almost universally accepted. However, the system will take a long time to unscramble, in spite of progress in pensioning off ageing administrators and academics into honourable retirement.

In the meantime, the Soviet

Quentin Peel looks at Moscow's modest record

**Scientific reforms urged**

Soviet economy where it hurts. The USSR must raise the quality and reliability of its production — through automation, robotics, computer-assisted design and manufacture.

"But that is precisely the area where they come up against Cocoom: production technology can be used to produce defence goods as well as civilian ones," said a Western scientist.

Cocoom restrictions have some effect, but less drastic, in the other area seen as most in need of transferred technology: bio-technology, where the advances in Western science have not been reflected in the USSR. The area is crucial for the Soviet Union because of the parlous state of both agriculture, and the health service.

"East-West relations have of late been bled white by Cocoom," Mr Mikhail Gorbachev told the Council of Europe in July.

The latest relaxation in Cocoom rules in August does allow the old generation of personal computers to come into the Soviet Union reasonably freely, making it possible for most 16-bit microcomputers to be sold, while maintaining the ban on 32-bit machines.

It still means that machines with the 286 chip, available over the counter in high street stores in western Europe and the US, are supposed to be banned. Restrictions remain on memory size and transfer speeds incorporated in main frame computers.

"The annoying thing is that within Comecon countries they are producing machines with bigger memories, but it is difficult to prove it," says Mr Bo Lapidstrom, general manager in the Soviet Union for KCL.

Western diplomats certainly recognise that the Cocoom restrictions are hitting the

of glasnost has meant is a dramatic improvement in communication between Soviet scientists and their Western counterparts. Joint scientific journals will help expose Soviet work to the outside world. Similarly, Western journals are becoming more freely available in the USSR.

Mr Yuri Oshpyn, director of the Institute of Solid State Physics, said restrictions have been lifted on publication of research formerly classified as defence-related. The only restrictions are on the technological aspects which are regarded as industrial secrets.

Dr Gury Marchuk, the president of the Academy of Sciences, has spelled out the areas where he sees Soviet science falling most seriously behind: high-velocity aerodynamics, in the development of new materials, and in bio-technology, although he says Soviet scientists are still ahead in protein synthesis, bio-energetics, and radiation bio-engineering.

The Soviet space programme is held up as one of the success stories but the useful results in the civilian sphere are limited. The main advance for Soviet science has been in space medicine — which is

fine for sending men to Mars, but not much use to stop children being infected with AIDS in central Asia.

Even the production in space of pharmaceuticals and semi-conductors could almost certainly be carried out more cheaply on earth.

In every sphere, it is the shortage of the sort of computer power taken for granted in the West which is hampering faster development.

A positive flood of Western computer companies is competing for the business perceived there.

The problem is the same as for the rest of the Soviet economy: a desperate shortage of foreign exchange to buy Western equipment.

What the Soviets have to offer in exchange is a considerable expertise in software. Years of living with the shrunken computer memories dictated by Cocoom rules have forced Soviet programmers to get much more ingenious than their Western counterparts.

On the face of it there should be a huge body of unexploited knowledge. Up to 80,000 Soviet inventions are registered in Moscow every year, but last year only 500 were registered internationally.

The trouble is that Western intermediaries are usually presented with enormous lists of inventions they might be interested in, without any attempt at discrimination.

Fund-raising is difficult, says Charles Batchelor

**In search of cash**

TRANSFERRING technology from one company to another is not without its problems. Shelbourne Reynolds, a Suffolk-based engineering company, discovered this when it decided to develop a grain stripper which speeds up the harvesting process.

Shelbourne decided for the first time to develop someone else's product under licence. It spent two years making prototypes and pre-production models until it made its first commercial sales in 1988.

The company is confident that the stripper will help double its turnover, currently £3.5m, within the next few years. But the development costs exceeded original estimates by four times, and the time taken to bring the grain stripper to market was much longer than expected.

Shelbourne consequently made its first loss in its 17-year history; the bank manager refused to provide further finance, and the company had to sell off 30 per cent of its shares to avoid liquidation.

For the smaller company, the problems of absorbing bought-in technology are acute. A large corporation may be able to write off the occasional hiccup but the finances of the small company are more finely balanced.

Developing your own technology is also fraught with problems. Persuading financial backers to support new technology has never been easy and the losses which many British investors suffered from backing technology-based businesses in the early 1980s has made financiers wary.

Paul de la Pena, a Midlands-based company which blends industrial lubricants, was forced to go to Italy for finance for a new sensor to measure the growth of bacteria in machine oils after unsuccessfully attempting to raise the money in Britain.

The company, which has turnover of £2.5m, spent £1m of its own funds before turning to outside finance. It raised £1.7m from Iritech, an Italian state-owned financing agency. Mr Paul de la Pena, the chairman, felt that British venture capitalists did not understand the technology and were not interested in backing a project which had already reached an advanced stage of development.

His complaints are given backing by the venture capital industry's statistics. Just 9 per cent of the investments by the UK venture capital industry in 1988 went to technology related businesses compared with 16 per cent the year before. These figures compare badly with the US where 75 per cent of venture funds invested since 1980 have gone into technology.

Companies based on UK science parks make sparing use of

venture capital. Only 3 per cent use venture funds to get started while just 8 per cent take in second stage venture finance, according to a recent survey.

The failure of British venture capitalists, and the Government, to back innovation and support the smaller company has attracted the attention of the Prince of Wales. In a speech in June to the British Venture Capital Association, he warned the industry about taking a short-term approach to its investments.

The result is that innovative small companies are frequently forced to put together a mosaic of funding to meet their financial requirements.

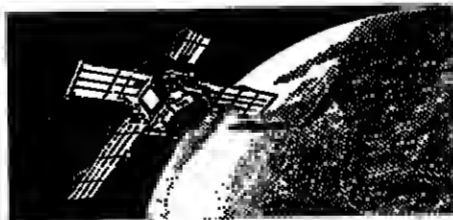
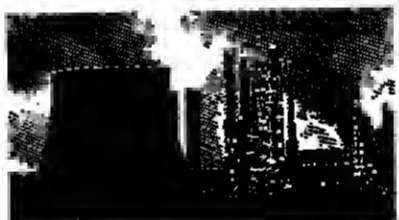
While technology-based companies may not appeal to the majority of venture capitalists, some venture funds have maintained a commitment to this sector. Transatlantic Capital, a London-based investment management company, earlier this month raised £6m for its third

Bio-Sciences Fund which will invest in the medical, health care and bio-technology industries in Europe and the US.

In June, N M Rothschild, the merchant bank, announced a £20m fund to finance companies involved with materials technologies. This year, technology funds were launched by Korda, a technology consultancy, which raised £5m; Prelude Technology Investments, a venture capital group raised £20m; Guinness Mahon, investment bank raised £25m and Charterhouse, a financial services group, £40m.

The banks have been taking a closer interest in technology-based businesses. Barclays Bank has taken a close interest in technology for some time while National Westminster bank earlier this year created a technology unit. NatWest is training technology managers for 25 of its main branches and has set up a Seed Capital Loan facility to provide loans of between £5,000 and £50,000.

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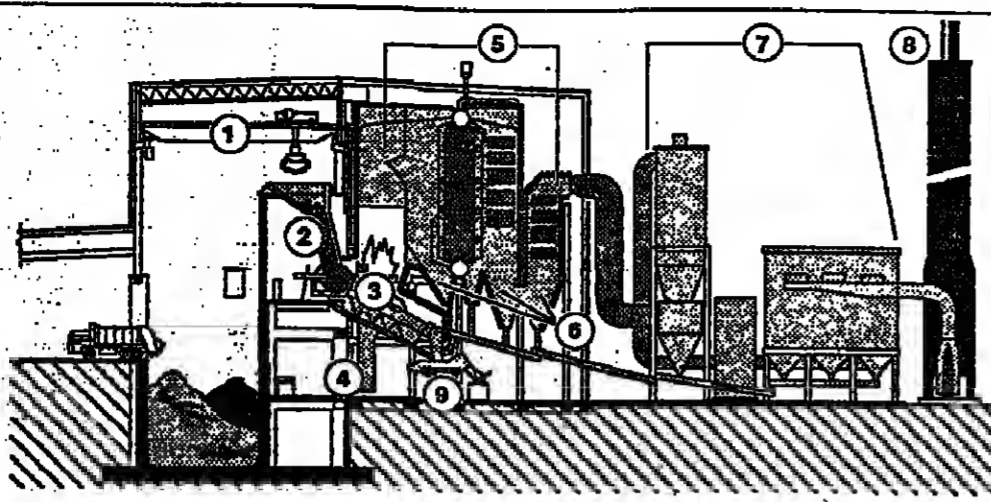
Attend our next seminar - Introduction to Licensing - planned for October 17 at Heathrow Park Hotel in collaboration with the DTI.

Ask our honorary treasurer Ms Renate Stehr for a full colour brochure on LES and details of the Heathrow seminar programme. She is at the Sobell Institute Ltd, 15 Hanover Square, London W1R 9AJ



TECHNOLOGY

Take some used disposable nappies, a few potato peelings, last weekend's newspapers and the stew little Tommy refused to eat. Use it to make a fire under a steam-producing boiler.



The Martin waste-to-energy incinerator is typical of its kind. The system uses 21 processes to turn domestic rubbish into power and heat.

The power of burning rubbish

Peter Knight assesses the practicality of incinerators which turn waste into energy

Until now, relatively cheap fossil fuels and inexpensive landfill sites have kept the concept of using rubbish for fuel as an obscure art.

This could change. The shortage of rubbish dumps near cities and the spiralling cost of transporting domestic refuse to landfill sites out of town has focused attention on waste-to-energy plants.

The US Environmental Protection Agency predicts that a quarter of the US domestic rubbish will be incinerated by 1990. An average US citizen throws away about 1.2 tons of refuse a year, nearly half of which is paper and other combustible materials.

UK citizens each dump about a third of a ton a year. If all the domestic rubbish in Britain were burned instead of dumped it would generate as much electricity as the proposed nuclear power plant at Hinkley Point, according to Bob Wheatley, sales manager of Martin Engineering Systems, the UK subsidiary of Martin Munich and CNIM of France.

The technology behind this type of plant was developed during the Second World War. Germany used it to burn low-grade coal. Small European countries with few landfill sites, such as Denmark and Switzerland, have used the incinerators since then to dispose of their rubbish.

chimney. Operators dispute these claims. They say no dangerous emissions have ever escaped from any plant. Greenpeace argues, and no one disagrees, that the ash which remains after the process contains dangerous substances, such as heavy metals. The ash has to be buried in special landfill sites designated for hazardous materials.

In temperature - for example, when rubbish of low calorific values is being burned - which means poisonous substances are not destroyed in the fire. Rubbish incinerators will have to include a fail-safe device that introduces fossil fuel to boost the fire if it drops below 850 degrees C.

Where money is concerned, there is no disagreement. The holders of waste-to-energy plants face high capital costs. "Incineration is a good way of getting rid of waste but only if you are recovering the heat. It's a very costly process and in the UK a lot more expensive than landfill," says Cooper.

"If you just want to generate electricity it's more economical to use a fossil fuel because the plant is cheaper to build," says Wheatley. "Refuse is the worst form of fuel (due to its inconsistency) that you can imagine. That's why the energy-from-refuse plants are expensive to build. The only way it will generate energy on a competitive basis is if the plant gets paid for the refuse it burns."

The costs of plants on the Continent are usually borne by the government or local authorities. The UK Government insists that they be self-financing. Raising the money is difficult because a large-scale plant burning rubbish could cost around £70m and will take 15-20 years to recoup the capital outlay.

Forming a consortium may be the solution. Equipment suppliers, project managers, plant constructors, energy wholesalers, energy customers (usually local authorities) and banks would be members. They would finance a feasibility study and, based on the outcome, form a utility company. The plant will only be viable if the boroughs pay the new company a "gate fee" to burn their rubbish and guarantee to supply sufficient refuse for the life of the plant.

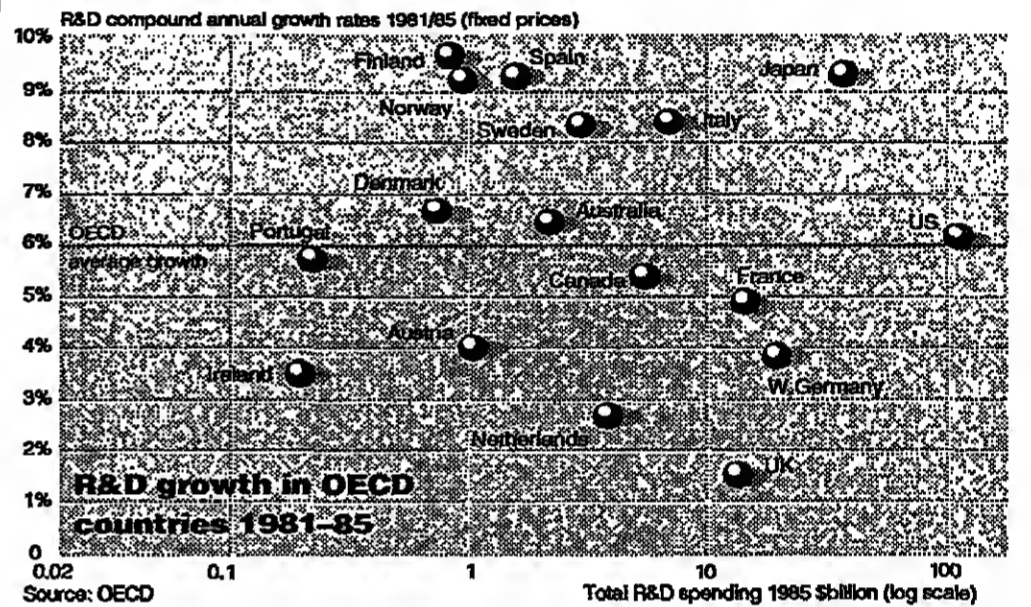
Britain falls by the R&D wayside

Clive Cookson looks at an OECD report on nations' spending

Britain was the only western industrial country in which the percentage of national income devoted to research and development declined during the first half of the 1980s, according to a new analysis by the Organisation for Economic Co-operation and Development.

The OECD, based in Paris, produces the most comprehensive statistics available for making international comparisons of R&D. But the figures are inevitably somewhat out of date; the new report has complete statistics up to 1985 and partial data to 1987.

The OECD report says the overall effect is "a weakening of the university research environment, with average financial resources per researcher falling, in particular capital expenditure." The report also analyses the growing international diffusion of technology through patents and licensing agreements. Most OECD countries import more "disembodied technology" in the form of licences and know-how than they export.



National Engineering Laboratory CIM Applications Centre. The CIMAC facility has been set up to disseminate expert advice on Open Systems (OSI) standards based communications and to create a greater awareness of the potential benefits of Computer Integrated Manufacture.

ENVIRONMENTAL MARKETS AND TECHNOLOGIES SCENARIOS UP TO 2000. Paris 26.27.10.89 - Dusseldorf 5.12.89 - Rome 14.12.89. The market for environmental technologies is in a state of enormous growth in Europe.

TECHNOLOGY TRANSFER SURVEY. Also appearing with this issue of the Financial Times is a survey of Technology Transfer. INTERNATIONAL MARKETING AND INNOVATION SERVICES.

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COMMODITIES AND AGRICULTURE

MP to seek court order closing Ok Tedi mine

A PAPUA New Guinean politician is to seek a court order temporarily closing the Ok Tedi gold and copper mine to the remote Fly River system because of environmental concerns, reports Reuter from Port Moresby.

the Fly River area and Mr Zeipi said trees and grasslands were already dying along the river as it silted up.

Table with 2 columns: Commodity, Price change. Includes Aluminium, Copper, Lead, Zinc, Tin.

Peru to offer silver bonuses

By Kenneth Gooding, Mining Correspondent

PERU'S PLAN to offer bonuses to producers to encourage silver bullion exports was not likely to disrupt the market, analysts said yesterday.

ducers... we've got to do something," he said. Mr Garcia gave no indication when the plan would be put into effect.

Putting the environment out to contract

Bridget Bloom on a radical proposal for protecting the British countryside

DO YOU have a favourite country view - a small spinney perhaps, nesting alongside a sparkling stream, or a knoll of trees perched atop a rolling downland?



John Gummer: "Interested, if uncommitted," says the CLA

THE BRITISH Government is to fund a study examining the economics of organic farming, its first investigation of the subject.

hensive "ment" of farm support which would reward farmers for choosing environmentally friendly practices.

CLA will next month take to Brussels to try to convince Mr Raymond MacSharry, European Community Agriculture Commissioner, of their worth.

sism tinged with what seems like embarrassment for its audacity. For Britain's landowners are quite essentially conservative, and the CLA is not known for producing radical ideas.

managed and accessible countryside. The CLA is not the only organisation concerned with farming and the countryside which is groping for some way of making sense of the plethora of special schemes to protect the countryside and help farmers adjust.

Mr Douglas admits there are problems with the idea. While it may be easy enough to envisage farmers contracting with a local birdwatcher's society, it is less easy to see how this could be done on the much larger scale that would be necessary with central government.

between groups of landowners and a professional agent, like a surveyor or land agent, acting on the government's behalf. This use of professional go-betweens, for example, would reduce the administrative burden while maintaining greater flexibility and initiative for the landowner.

Honduran banana dispute continues

By Robert Graham

WORKERS AT the Tela Railroad Company, the largest banana producer in Honduras and owned by United Brands, yesterday defied a presidential decree to end a 5-day strike.

packaging operation under dispute to be transferred to an independent producer with guarantees about wage levels.

Malawi aims for bigger slice of sugar loaf

Mike Hall on obstacles to growth for one of the world's lowest cost producers

PRESSURES to expand sugar production in this small southern African country are mounting.

Mauritius, Swaziland and South Africa. Output has since grown to an annual average 165,000 tonnes.

Table: Malawian Sugar Output (000 tonnes). Columns: Year, Output.

devaluations of the kwacha. Lounbo manages both estates. It holds a 51 per cent stake in Sucuma with the peasant Agricultural Development and Marketing Corporation holding the rest.

comprising 1 per cent of the total US import quota. About 13,000 tonnes goes to Portugal at world market prices under a long-term agreement.

WORLD COMMODITIES PRICES

Large table containing various commodity price listings including LONDON MARKETS, SPOT MARKETS, COCOA, LONDON METAL EXCHANGE, POTATOES - IRIPE, SOYABEAN MEAL - IRIPE, RUBBER, COPPER, and various oil and grain prices.

LONDON STOCK EXCHANGE

Sterling's fall sends equities reeling

THE SUDDEN collapse in sterling to below DM 3.00 dealt a fresh and brutal blow to confidence in the London equity market yesterday. Share prices were struck lower from the opening and attempts to steady the FT-SE 100 mark merely tapped out a few more sellers. The market closed very near the day's low with a loss of more than 30 points on the Footsie Index. Turnover was a modest 425.8m shares.

Sterling's heavy fall, which began in the Far East and largely preceded the opening of the London equity market after the weekend, presented the City of London with two new causes for dismay. It raised the

probability of internal pressures within the Thatcher Government and from its supporters. The FT-SE Index ended the day at 2,247 with some traders asking themselves whether it would continue to fall towards the 2,200 mark predicted by a number of equity analysts. Concern that the latest hike in interest rates could tip the UK economy into recession was heightened by a depressing survey of industrial opinion by Dun & Bradstreet, the market and business data group. From within the London market, Kleinwort Benson commented: "Higher interest rates have clearly increased the risk of recession."

Interest rate pressures were of both Dutch and UK Unilever shares and light arbitrage buying, as holders of Unilever's Dutch shares moved into the cheaper UK shares. Mr Carl Short of Kitcat & Aitken said Unilever's UK shares were trading at an 8.5 per cent discount to their Dutch counterparts. "Historically, that is quite a big discrepancy and the arbitrageurs appear to be realising it," he said. Unilever closed up 9 at 649p.

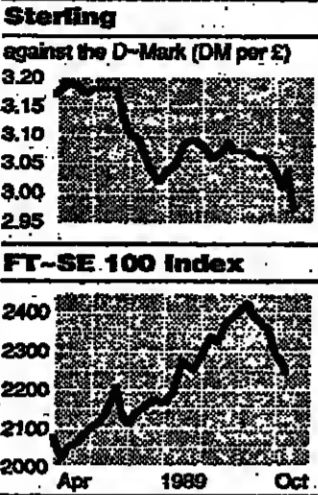
Europe did not inspire the market. The shares fell 6 before recovering some ground to close 4 worse on balance at 169p. Yesterday's tea auctions in London showed another sharp rise in wholesale prices. Tea producer share prices benefited, with overseas trader James Finlay steady at 130p and plantation operator Chillingham a penny firmer at 182p. Mr Stephen Quayle, analyst at Sheppards, said that tea shortages had arisen in the wake of civil unrest in Sri Lanka, Chernobyl's effect on Georgian production, which had brought the Soviet Union to the London market as buyers for the first time in years, and the uncertainty surrounding the outcome of the Indian general election expected in December.

The clearing banks were lower across the board albeit in thin trading. Irish banks were bolstered by the exchange rate and a recent positive note on the Irish banks from a Dublin broker, according to dealers. Allied Irish moved up 6 to 124p and Bank of Ireland 3 to 247p. Shell extended their good run, adding a further 5 at 440p on turnover of 2.5m. Dealers said there had been more switching out of Royal Dutch into Shell. Additionally, a leading agency broker was said to have hosted a lunch for the company yesterday. Easter prices were said to have been propped up by the £200m cash cash mountain, the shares selling ahead to 590p.

Details of Eurotunnel's predictions of higher revenues from the Channel tunnel left the shares another 40 off at 529p. "Not much to do with the new forecasts," said one analyst. "There is very little rationale about the behaviour of Eurotunnel's share price." BZW changed its recommendation

Second thoughts on Jaguar

There was no stopping Jaguar from once again taking centre stage in the motors and engineering sector. Weekend press suggestions that General Motors might take a stake knocked Jaguar shares back sharply as the London market took the view that such a development might drive away Ford. Volume quickly expanded to 10m shares as UK profit-takers found ready buyers at US broking houses.



Jaguar's formal acknowledgment that it was in talks with GM over joint ventures and a possible minority stake in Jaguar came shortly after the market closed. Jaguar shares ended 46 lower at 685p, with prices drifting weaker in after hours trading. Dealers said the market feared an agreed GM stake might persuade Ford, which has said it wants to take 15 per cent of Jaguar, to back away from an action for the UK luxury car maker.

However, analysts and market-makers were divided about whether sellers had been more astute than buyers. One dealer insisted that "the market has come to its senses." But Mr Gavin Latimer, analyst at Kilmort & Partners, could not see how Jaguar and General Motors could tie up a friendly deal without shareholder approval. "Shareholders are unlikely to want to block possible higher bids."

Burmah strong Among a small number of Footsie stocks showing a gain on the session, Burmah Oil stood out with a steady rise. The market's view that a stake building operation could be in motion as a possible prelude to a full bid. Another story was that Burmah might be gearing up to launch a bid for Calor and would help finance this by selling its near 30 per cent stake in Premier Consolidated Oilfields. Dealers and specialists pointed out that neither of these stories was new and that both had been given a good airing in the past few months, "with nothing coming of either of them."

Burmah shares were up and running at the outset, helped by a couple of recent positive notes on the stock, notably from Hoare Govett and Citicorp Sringear Vickers. Buying gathered pace, however, when a 505,000 block was recorded on the Seag ticker, although it was later revealed as a trade reporting error which should have read a

50,000 shares. Citicorp, which is said to have built a 4 per cent-plus stake in Burmah for SEV, the Dutch group, in past months were seen to be keen buyers of Burmah yesterday, leading to talk that it was adding to its stake of 7.2m shares. Burmah closed 18 higher at 619p, after 521p, while Calor jumped 10 to 415p. Premier eased a penny to 100p.

Stores had a grim day as the weak sterling raised the spectre of yet another interest rate rise. The more speculative issues fell steeply, and even Marks & Spencer, acknowledged to be the most defensive stock in the sector, slipped 2 1/2 to 157p.

Tesco closed unchanged at 159p and remained the sector's favourite defensive stock. Analysts at Kitcat & Aitken recommended investors add to their holdings of Tesco as they believe it is set to assume Sainsbury's mantle as the industry leader in the 1990s. The defensive nature of the food retailing sector helped most of the larger companies avoid the sharp losses of the rest of the market. Sainsbury's closed 1/2 lower at 259p, while Asda eased 4 to 217p and Asda 7 to 187p. Unilever recorded the second largest rise on the stock market yesterday, boosted by sterling's fall, particularly against the DM. "With 80 per cent of Unilever's profits coming from overseas and a large part of that coming from Europe sterling's decline was good news for Unilever," said Mr David Shaw of Laming & Crutchbank. Dealers spoke of US buying

of both Dutch and UK Unilever shares and light arbitrage buying, as holders of Unilever's Dutch shares moved into the cheaper UK shares. Mr Carl Short of Kitcat & Aitken said Unilever's UK shares were trading at an 8.5 per cent discount to their Dutch counterparts. "Historically, that is quite a big discrepancy and the arbitrageurs appear to be realising it," he said. Unilever closed up 9 at 649p.

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APPOINTMENTS

Albert Fisher Changes at Barclays Bank top US post

ALBERT FISHER HOLDINGS, the fresh produce distributor and processed foods supplier, has appointed Mr Keith Brackpool to the newly-created post of chief executive officer for its North American operations, writes Clay Harris. Mr Brackpool is chairman and chief executive of Pacific Agricultural Holdings, a Nasdaq-traded California farming and land company in which Fisher owns a 25 per cent stake. He will remain on the US company's board.

Chief executive of Vosper Thornycroft

Mr Martin Jay has been appointed managing director and chief executive of VOSPER THORNYCROFT HOLDINGS. Mr Peter Usher, who has been managing director for the past eight years, assumes the role of deputy chairman. Mr Jay joins from GEC Electronic Devices.

NEW HIGHS AND LOWS FOR 1989

Table listing various stocks and their performance metrics for 1989, including categories like NEW HIGHS, LOWS, and SHARES.

SMITHS INDUSTRIES has appointed Mr Graham Thornton as marketing director in its aerospace group.

Mr Alan Fort has been appointed finance director of UNITED TRANSPORT TANKERS EUROPE, a division of United Transport Europe.

Mr Michael Schofield has been made group managing director for YALE SECURITY INC's European operation.

Mr Alastair Villiers has been appointed managing director of MATHESON SECURITIES.

Former ICL executive, Mr Brian McGregor, has been appointed chief executive of WHITE HORSE OFFICE SYSTEMS, an office automation company.

Mr Stephen R. Collins has joined the GAINSBOROUGH GROUP as financial director.

Mr Ben Rowe has become actuary in addition to his duties as director of CANNON ASSURANCE.

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FINANCIAL TIMES STOCK INDICES

Table showing various stock indices including Government Secs, Fixed Interest, Ordinary Share, Gold Mines, FT-SE 100 Share, and FT-SE 100 Share (1974=100). It includes columns for Oct 9, Oct 8, Oct 7, Oct 6, Oct 5, Oct 4, Oct 3, Oct 2, Oct 1, and Year Ago.

TRADING VOLUME IN MAJOR STOCKS

Table showing trading volume for various stocks including ASB Group, Anglo National, Anglo Saxon, Anglo Irish, Anglo American, Anglo Overseas, Anglo Pacific, Anglo Caribbean, Anglo African, Anglo Asian, Anglo European, Anglo American, Anglo Overseas, Anglo Pacific, Anglo Caribbean, Anglo African, Anglo Asian, Anglo European.

Calculation of the FT Indices of daily Equity Bargains and Equity Value, and of the five-day averages of Equity Bargains and Equity Value, was discontinued on July 31. The International Stock Exchange, the source of our data for these indices, has altered the basis of its reporting of equity transactions, making it impossible to resume the previous series. Calculation of the FT Indices of daily Gilt Edged bargains and of the five-day average of Gilt Edged bargains will continue as before. Closing values of the discontinued series are available on request. FT Prices 873-4007.

BUSINESSES FOR SALE

SHARP & LAW PLC (IN RECEIVERSHIP)

Sharp & Law was established in 1911 and is a name that is synonymous with high quality shopfitting throughout the UK. The company is based in Bradford, West Yorkshire and its core businesses are offered for sale. Details are as follows:-

Advertisement for Sharp & Law PLC, detailing various business units for sale: Sharp & Law Storefitters, Law's Decorators, Cardinal Shopfitting Systems, Sharp & Law Project Management, and Law's Electrical. Each unit includes a brief description of the business and its turnover.



FT UNIT TRUST INFORMATION SERVICE

Current Unit Trust Prices are available on FT Cityline. To obtain your free Unit Trust Code Booklet ring the FT Cityline help desk on 01-925-2128

AUTHORISED UNIT TRUSTS

Main table containing unit trust information with columns for Unit Name, Price, and other details. Includes sub-sections like 'Global Asset Management (2000F)', 'Equity & Law Unit Trusts (2000H)', and 'Fixed Income Unit Trusts (2000I)'.

GUIDE TO UNIT TRUST PRICING. Text explaining how unit prices are calculated, including the role of the Investment Manager and the effect of expenses on the price.

FT UNIT TRUST INFORMATION SERVICE

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Main table containing unit trust information with columns for Name, Price, Yield, and other financial metrics. Includes sub-sections for 'OTHER UK UNIT TRUSTS' and 'INSURANCES'.

OTHER UK UNIT TRUSTS

Table listing various UK unit trusts such as 'Fidelity Investment Services Ltd', 'Robit Planning Assets Ltd', and 'Lazard Freres & Co Ltd'.

INSURANCES

Table listing insurance companies and their unit trusts, including 'AA Friendly Society' and 'Abey Life Assurance Co Ltd'.

Continued on next page

FT UNIT TRUST INFORMATION SERVICE

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Main table containing financial data for various unit trusts, organized into columns by fund name, price, and other details. Includes sub-sections like 'OFFSHORE AND OVERSEAS' and 'GUERNSEY (SB REDUCED)'. The table lists numerous unit trust names such as 'Premier Life Assurance Co Ltd', 'Scottish Equitable Life Assurance Co Ltd', and 'Target Life Assurance Co Ltd'.

OFFSHORE AND OVERSEAS

GUERNSEY (SB REDUCED)

JERSEY (SB REDUCED)

LUXEMBOURG (SB REDUCED)

SWITZERLAND (SB REDUCED)

GUERNSEY (\*\*)

JERSEY (\*\*)

LUXEMBOURG (\*\*)

JERSEY (\*\*)

LUXEMBOURG (\*\*)

JERSEY (\*\*)

LUXEMBOURG (\*\*)

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LUXEMBOURG (\*\*)

FT UNIT TRUST INFORMATION SERVICE

Table of FT Unit Trust Information Service, listing various unit trusts with columns for Name, Price, Yield, and other financial metrics.

LONDON SHARE SERVICE

Table of London Share Service, including sections for British Funds, Loans, Foreign Bonds & Rails, Americans, and Money Market Trust Funds, with columns for Name, Price, Yield, and other financial metrics.

LONDON SHARE SERVICE

Latest Share Prices are available on FT Cityline. To obtain your free Share Code Booklet ring the FT Cityline help desk on 01-825-2128

AMERICANS - Contd. Table listing various American companies and their share prices.

CANADIANS. Table listing various Canadian companies and their share prices.

BANKS, HP & LEASING. Table listing banks and hire purchase/leasing companies.

CHEMICALS, PLASTICS. Table listing companies in the chemical and plastics industries.

BEERS, WINES & SPIRITS. Table listing companies in the beverage industry.

BUILDING, TIMBER, ROADS. Table listing companies in the construction and infrastructure sectors.

DRAPERY AND STORES - Contd. Table listing drapery and retail stores.

ELECTRICALS. Table listing electrical engineering and equipment companies.

DRAPERY AND STORES. Table listing drapery and retail stores.

DRAPERY AND STORES. Table listing drapery and retail stores.

ENGINEERING. Table listing engineering and technology companies.

ENGINEERING - Contd. Table listing engineering and technology companies.

ENGINEERING - Contd. Table listing engineering and technology companies.

FOOD, GROCERIES, ETC. Table listing companies in the food and grocery sectors.

HOTELS AND CATERERS. Table listing hotels and catering services.

INDUSTRIALS (Misc.) Table listing various industrial companies.

INDUSTRIALS (Misc.) - Contd. Table listing various industrial companies.

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INDUSTRIALS (Misc.) - Contd. Table listing various industrial companies.

INSURANCES. Table listing insurance companies.



LONDON SHARE SERVICE

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LEISURE

Table of share prices for Leisure sector including companies like Leisure Group, Leisure World, etc.

PAPER, PRINTING, ADVERTISING - Contd

Table of share prices for Paper, Printing, Advertising sector including companies like Newsprint, etc.

TEXTILES - Contd

Table of share prices for Textiles sector including companies like Textiles, etc.

TRUSTS, FINANCE, LAND - Contd

Table of share prices for Trusts, Finance, Land sector including companies like Finance, etc.

OIL AND GAS - Contd

Table of share prices for Oil and Gas sector including companies like Oil, etc.

MINES - Contd

Table of share prices for Mines sector including companies like Mines, etc.

MOTORS, AIRCRAFT TRADES

Table of share prices for Motors, Aircraft Trades sector including companies like Motors, etc.

PROPERTY

Table of share prices for Property sector including companies like Property, etc.

TRANSPORT

Table of share prices for Transport sector including companies like Transport, etc.

TOBACCO

Table of share prices for Tobacco sector including companies like Tobacco, etc.

OVERSEAS TRADERS

Table of share prices for Overseas Traders sector including companies like Overseas, etc.

THIRD MARKET

Table of share prices for Third Market sector including companies like Third Market, etc.

Commercial Vehicles

Table of share prices for Commercial Vehicles sector including companies like Commercial, etc.

TRUSTS, FINANCE, LAND

Table of share prices for Trusts, Finance, Land sector including companies like Trusts, etc.

Investment Trusts

Table of share prices for Investment Trusts sector including companies like Investment, etc.

Finance, Land, etc

Table of share prices for Finance, Land, etc sector including companies like Finance, etc.

PLANTATIONS

Table of share prices for Plantations sector including companies like Plantations, etc.

MINES

Table of share prices for Mines sector including companies like Mines, etc.

Components

Table of share prices for Components sector including companies like Components, etc.

Garages and Distributors

Table of share prices for Garages and Distributors sector including companies like Garages, etc.

NEWSPAPERS, PUBLISHERS

Table of share prices for Newspapers, Publishers sector including companies like Newspapers, etc.

Far West Rand

Table of share prices for Far West Rand sector including companies like Far West, etc.

Central Rand

Table of share prices for Central Rand sector including companies like Central, etc.

Eastern Rand

Table of share prices for Eastern Rand sector including companies like Eastern, etc.

PAPER, PRINTING, ADVERTISING

Table of share prices for Paper, Printing, Advertising sector including companies like Paper, etc.

SHOES AND LEATHER

Table of share prices for Shoes and Leather sector including companies like Shoes, etc.

SOUTH AFRICANS

Table of share prices for South Africans sector including companies like South Africans, etc.

OIL AND GAS

Table of share prices for Oil and Gas sector including companies like Oil, etc.

DIAMOND AND PLATINUM

Table of share prices for Diamond and Platinum sector including companies like Diamond, etc.

REGIONAL & IRISH STOCKS

Table of share prices for Regional & Irish Stocks sector including companies like Regional, etc.

TEXTILES

Table of share prices for Textiles sector including companies like Textiles, etc.

TRADITIONAL OPTIONS

Table of share prices for Traditional Options sector including companies like Traditional, etc.

PROPERTY

Table of share prices for Property sector including companies like Property, etc.

MINES

Table of share prices for Mines sector including companies like Mines, etc.

OVERSEAS TRADERS

Table of share prices for Overseas Traders sector including companies like Overseas, etc.

PLANTATIONS

Table of share prices for Plantations sector including companies like Plantations, etc.

This service is available to every Company dealt in on Stock Exchanges throughout the United Kingdom for a fee of £200 per annum for each security.

CURRENCIES, MONEY AND CAPITAL MARKETS

FOREIGN EXCHANGES

Pound falls below DM3.00

FEARS ABOUT the British economy, and the belief that another rise in bank base rates is not a viable policy at present, pushed sterling down sharply yesterday.

Dealers regarded the method of intervention by the Bank of England yesterday as a significant signal that the authorities had changed policy and were no longer trying to defend a sterling level of DM3.00.

Starting fall 5.50 pennings to DM2.9750, the lowest closing level in London since mid-February 1988. It also lost 2.35 cents to \$1.5790 and fell to Y225.25 from Y228.75...

It is also a difficult time for the Government, with the Conservative Party Conference starting in Blackpool today. Another rise in base rates appears to the City to be politically unacceptable...

Yesterday's slide below DM3.00 led to speculation that sterling is unlikely to stop falling until the mid DM2.80's, and that this could be a fairly fast process.

With New York trading at a much reduced level, and with attention focused on sterling, the dollar drifted quietly, falling to DM1.8445 from DM1.8375...

EURS EUROPEAN CURRENCY UNIT RATES

Table with columns: Currency, Unit, Rate, % change from unit, % change adjusted for divergence, Divergence %.

POUND SPOT - FORWARD AGAINST THE POUND

Table with columns: Date, Day's period, Rate, One month, % p.a., Three months, % p.a., Six months, % p.a., One year, % p.a.

DOLLAR SPOT - FORWARD AGAINST THE DOLLAR

Table with columns: Date, Day's period, Rate, One month, % p.a., Three months, % p.a., Six months, % p.a., One year, % p.a.

CURRENCY RATES

Table with columns: Currency, Rate, % change from unit.

EURO-CURRENCY INTEREST RATES

Table with columns: Date, Term, Rate, % p.a., % p.a., % p.a., % p.a., % p.a., % p.a.

EXCHANGE CROSS RATES

Table with columns: Currency, Rate, % change from unit.

FINANCIAL FUTURES AND OPTIONS

Table with columns: Series, Call-Settlement, Put-Settlement, Price, Dec, Mar, Jun, Sep, Est. volume.

CHICAGO

Table with columns: Date, Open, High, Low, Prev. Close, Price.

PHILADELPHIA EXCHANGE

Table with columns: Date, Open, High, Low, Prev. Close, Price.

LONDON (LIFFE)

Table with columns: Date, Open, High, Low, Prev. Close, Price.

JAPANESE YEN (MGO)

Table with columns: Date, Open, High, Low, Prev. Close, Price.

EUROPEAN OPTION EXCHANGE

Table with columns: Series, Bid, Ask, Last, Settle, Vol, Open, High, Low, Prev. Close, Price.

FT-SE 100 INDEX

Table with columns: Date, Open, High, Low, Prev. Close, Price.

CURRENCY MOVEMENTS

Table with columns: Currency, Movement, % change.

FT LONDON INTERBANK FIXING

Table with columns: Date, Term, Rate, % p.a., % p.a., % p.a., % p.a., % p.a.

NEW YORK

Table with columns: Date, Term, Rate, % p.a., % p.a., % p.a., % p.a., % p.a.

LONDON MONEY RATES

Table with columns: Date, Term, Rate, % p.a., % p.a., % p.a., % p.a., % p.a.

BASE LENDING RATES

Table with columns: Bank, Rate, % p.a., % p.a., % p.a., % p.a., % p.a.

CLASSIFIED ADVERTISEMENT RATES

Table with columns: Category, Rate, % p.a., % p.a., % p.a., % p.a., % p.a.

MONEY MARKETS

London rates firm

AN UPWARD move in wholesale money rates in London reflected concern about the weakness of sterling. Similar conditions in Frankfurt were largely technical and were not accompanied by the same amount of nervousness.

Three-month sterling inter-bank rose to 15.14% from 14.9% per cent, but suggestions that the UK authorities had given up the battle to hold the pound above DM3.00 meant

scramble for funds on the money market yesterday. The Bank of England forecast a money market credit ceiling of £150bn, but revised this to £100bn at noon. The authorities did not operate in the market to buy any bills, but provided late assistance of around £45bn.

MONEY MARKETS

FT LONDON INTERBANK FIXING

Table with columns: Date, Term, Rate, % p.a., % p.a., % p.a., % p.a., % p.a.

NEW YORK

Table with columns: Date, Term, Rate, % p.a., % p.a., % p.a., % p.a., % p.a.

LONDON MONEY RATES

Table with columns: Date, Term, Rate, % p.a., % p.a., % p.a., % p.a., % p.a.

BASE LENDING RATES

Table with columns: Bank, Rate, % p.a., % p.a., % p.a., % p.a., % p.a.

CLASSIFIED ADVERTISEMENT RATES

Table with columns: Category, Rate, % p.a., % p.a., % p.a., % p.a., % p.a.

Our 1987/88 Managed Account yielded a profit of 40.54% NET. Our 1988/1989 Managed Account yielded a profit of 24.80% NET. The Audited 1st 1/4 of our 1989/90 Managed Account yielded a profit of 48.33% NET. INTERESTED? PETLEY & CO LTD YOUR ONLY OPTION FOR FUTURES. Specialist 01-225-3011. 2 Edinburgh Gate, Knightsbridge, London SW1X 7NA.

LEGAL NOTICES. IN THE MATTER OF COMPROMISE (CYPRUS) LIMITED AND IN THE MATTER OF THE CYPRUS COMPANIES LAW CAP 113.

OBITUARY. In memory of the late Mrs. Helen Mary Jones, who died on 25th September 1989.

CLUBS. The club has organized a series of events to support the charity.

JOTTER PAD. A collection of software packages to suit your business needs appears every Saturday in the WEEKEND FT.

CROSSWORD. No.7,059 Set by QUARK.

CROSSWORD grid with 15x15 squares and clues. Clues include: 1 Directness prepared about the established church, 2 Stuck out? (7), 3 Change claimed in certain currency, 4 Dog selected from a variety of breeds (6), 5 State tendency initially to turn away (5), 6 Become suddenly tense (applies to one's resolve) (7), 7 One with a tale getting about quite a bit (9), 8 Gaining fin to grip at sea (9), 10 Began without aim and without limits (4-6), 11 Worry preceding work perhaps (6), 12 Not possible to get change (5), 13, 14 Not disturbing the protective layer (6,8), 15, 16 Sometimes acts as if he's got the pip? (8,5), 17 One's return in Florence? (4), 18 Studies quality round the north having inhibition (10), 19 Have regard in the main for a lecturer? No, top man in the main (7), 20 Corporation's silly ban about roof structure (7), 21 Doll way to get away for sailing (6,8), 22 English vessel in general is the holder of seeds (5), DOWN: 1 Ascoli going round either way (9), 2 Set thrown in lake makes a recovery (5,2), 3 Plant horse-power up, having remarkable effects (9).

WORLD STOCK MARKETS

Table of world stock markets including sections for Austria, France, Germany, Italy, Sweden, Denmark, Finland, Japan, and Australia. Each section lists various stocks and their prices.

Table of stock indices including New York, Standard and Poor's, and various international indices like Australia, Belgium, Canada, etc.

Table of Tokyo - Most Active Stocks, listing various Japanese stocks and their trading activity.

Advertisement for Financial Times newspaper, featuring the headline 'From coast to coast, the Financial Times is now available for hand-delivery...' and a list of cities where it is available. Includes a stylized graphic of a street lamp and a sign for 'WALL ST.'.

Table of Japanese stock markets, listing various Japanese companies and their stock prices.

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4pm prices October 9

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Main table containing stock prices, organized into columns with headers like '12 Month High', 'Low', 'Open', 'Close', 'Change', 'Volume', 'Bid', 'Ask', 'Last Sale', 'Settlement', 'Dividend', 'Yield', 'P/E', 'Market Cap', 'Sector', 'Company Name'.



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NYSE COMPOSITE PRICES

OVER-THE-COUNTER

Nasdaq national market, 3pm prices October 9

Table of NYSE Composite Prices listing various stocks with columns for stock name, price, and change.

Table of Over-the-Counter prices listing various stocks with columns for stock name, price, and change.

AMEX COMPOSITE PRICES

4pm prices October 9

Table of AMEX Composite Prices listing various stocks with columns for stock name, price, and change.

Table of AMEX Composite Prices listing various stocks with columns for stock name, price, and change.

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WORLD STOCK MARKETS

AMERICA
Dow reaches all-time high in quiet holiday trading

Wall Street

AFTER DRIFTING lower during the morning session yesterday, equities picked up and ended at another all-time high in extremely quiet business with many traders away for Columbus Day and Yom Kippur holidays, writes Janet Bush in New York.

American Airlines, added 1 1/4 to \$104.4. Some shareholders were reported to have said that they wouldn't necessarily back the "just say no" defence of company chairman, Mr Robert Crandall, against the \$120 a share offer announced by New York real estate developer, Mr Donald Trump.

from the money market on Friday, but the Fed Funds rate nevertheless moved well below 9 per cent, suggesting that there had been an easing move. The Fed is believed to have decided to ease as part of a Group of Seven agreed package aimed at driving the dollar down. The easing appeared to coincide with interest rate rises in Europe.

EUROPE
Vigour and high volume in West German blue chips

HESITATION marked a number of Continental markets yesterday as they failed to match the vigour of their West German counterpart, writes Our Markets Staff.

Navigation Mitte, the holding company with insurance interests, was up Ffr15 to Ffr1,470 and actively traded. The state-owned Assurances Generales de France said it had raised its stake to more than 75 per cent, earlier the stock exchange said Mercury Asset Management, the UK portfolio manager, had sold a 6.6 per cent stake.

Madrid dribbled on downwards, with lower volumes indicating that caution has taken hold of the market in the run-up to the elections on October 20.

World unmoved by struggle of the giants

By Alison Maitland

Table with columns: % change in local currency, 1 Week, 4 Weeks, 1 Year, Start of 1989, % change in sterling, Start of 1989. Lists countries like Austria, Belgium, Denmark, etc.

THE US and Japan joined battle for the world cup last week but the struggle between the heavyweights ended in a nil-nil draw.

than expected employment growth which, with the dollar's resilience, suggested to some analysts that interest rates could come down.

rise for Europe as a whole while Europe excluding the UK gained a healthier 1.3 per cent.

ASIA PACIFIC

Yen's recovery shakes off investors' worries

Tokyo

INVESTORS took heart from the yen's recovery and last week's strength on Wall Street, and shares made a good start to the week, writes Michio Nakazono in Tokyo.

South Korea lowered the market temperature elsewhere, and the Pacific Basin put up a mixed performance yesterday.

Share prices were reported generally as climbing and closing firmer in spite of some profit-taking. Falls in some index-component stocks pushed the S&P 500 down.

NEW ZEALAND fell sharply in light trade, affected by market holidays elsewhere. Sentiment was also dampened by last week's collapse of DFC New Zealand, the investment bank.

TAIWAN chalked up a further recovery as the weighted index finished 94.72 higher at 9,965.58.

Table titled 'FT-ACTUARIES WORLD INDICES' showing various regional and world indices with columns for US Dollar Index, Day's Change, Local Currency Index, etc.

Advertisement for DnC Den norske Creditbank PLC. Includes text: 'Commercial Loans £1m+', 'Acquisitions: Buy-ins', 'Management Buy-outs: Property', 'Aviation: Shipping', 'Interest-rate Contracts', 'Foreign Exchange'. Also features a large graphic of a globe and the slogan 'We speak your language'.